OCTOBER, 1883.

THE REMARKABLE WEATHER of the past year, and, in fact, of the past two years, has excited the comment of the dullest observer, and the past few months have developed storms of such energy and magnitude as to cause alarm even to stout hearts. Storms of unwonted severity at sea, tornadoes devastating large tracts of country, ruining crops and buildings, and killing human beings and domestic animals, rains and floods that do similar and not less damage, hail storms of unusual severity and extent, untimely frosts that take tithe, and perhaps repeat the exaction from the crops already diminished by other fatalities and by the late, cool spring and summer, all these demand some notice, although an entirely satisfactory explanation of this unusual condition of things may not be possible. It is unnecessary here to recount in detail the disasters by sea and land that have followed each other in quick succession for months past, in nearly all parts of the world, for the press of the country has given this information with promptness and fair accuracy. The farmer, the fruit-grower, the gardener, find themselves controlled, in some measure, by unusual meteorological conditions for which ordinary prevision has made no calculation, and by which results that might reasonably have been expected have been frustrated. For many years past some scientific observers have been of the opinion that there is a close relation between sun-spots and the meteorological conditions of the earth, though no positive conclusions, allowing us to predicate with certainty the relation of terrestrial storms to sun-spots, have been reached. But it must be considered that the observations relating to this subject are yet too limited in number, and confined to too few points on the earth's surface to admit of general deductions of much value. However, the number of persons interested in this subject, who are noticing and recording facts in relation to it, is constantly increasing, the telegraph, that now nearly surrounds the world, brings to our knowledge almost instantly the occurrence of storms in the remotest quarters, and facts are accumulating with growing rapidity, tending to establish a relationship of sun-spots with many of our meteorologic changes; especially within the last two years, while sun-spots have been both numerous and large, have important coincidences been noticed and recorded, but the full significance of which is not yet probably, fully realized. Without examining the scientific opinions of the nature of the sun, or of sun-spots, we wish merely to call attention to the subject of sun-spots in a general way as a means, if possible, of accounting sufficiently for the phenomenal weather al-

ready alluded to, or for considering it, at least, a partially disturbing factor. Sir WILLIAM HERSCHEL thought the evidence was conclusive to establish the relation of sun-spots with the price of Wheat, and though this enthusiastic idea was not realized by him, it is not so sure that it was wholly without foundation in the face of subsequent records, and of the events of the present year. Sun-spots are seen every year, but some years they are few and small, at other times they occur in great numbers and are of large size. Sometimes they are so large as to be seen with the naked eye, by the use of a proper shade or screen. The telescope reveals many that are otherwise invisible. This instrument first came into use in 1608 or 1609, in Holland, and the next year or two after several observers, by means of it, independently discovered sun-spots. Dr. YOUNG, in his work, *The Sun*, says: "Even before the days of telescopes there are numerous records of dark spots seen by the naked eye upon the disc of the sun, especially in the annals of the Chinese. In the year 807, A. D., a large spot was visible in Europe for some eight days, and was supposed by many to be the planet Mercury, as was the case with a spot observed by KEPLER, in 1609; indeed, in all cases where such appearances were noted, they were invariably ascribed to bodies intervening between the earth and the sun. The idea of such imperfections upon the disk of a celestial body was utterly repugnant to the theological philosophy of the middle ages, and was admitted only slowly and grudgingly even after the demonstration of the fact was complete."

From the records kept it is found that the times when sun-spots are most numerous—maximum periods, and the times when they are least numerous—minimum periods, recur with considerable regularity, but the time is not exact, varying from a little over eight to a little over sixteen years. The average length is a little over eleven years. The last period of maximum was in the summer of 1871, more than twelve years since. During the time for which the periods have been computed, that is since the year 1610, the periods that have been twelve years, or twelve years and a fraction, in length, have been six in number; those that have been thirteen years and a fraction are four. All the other periods have been shorter, with the exception of four, and of one of these, that from 1788 to 1804, the author already quoted, says: "Some astronomers contend that there ought to be another maximum inserted about 1795. Observations about this time are few in number and not very satisfactory." The same explanation may possibly account for the other long periods. As the present term has passed into the thirteenth year, we have some reason to expect it to terminate in a few months, but possibly not for another year. That there is a direct connection between the changes in the sun-spots and magnetic and electrical disturbances is proved beyond any question, but this proof can not be offered here; the evidences are so conclusive that all scientists admit them. The problem still to be solved is, how much is due, in the origin of our storms, to electrical or magnetic action. "In 1872, Mr. MELDRUM, director of the observatory at Mauritius, published a comparison between the number of cyclones observed in the Indian Ocean and the state of the sun, and pointed out that the number of cyclones was greatest at the time of a sun-spot maximum. Mr. MELDRUM has attempted to supply this confirmation by tabulating the rainfall at a number of stations in and near the Indian Ocean. He obtained a result confirmatory on the whole, though there are several discrepancies. Mr. LOCKYER, from observations of the rainfall at the Cape of Good Hope and Madras, gets corroborative figures. Mr. SYMONS, from the British rainfall of the past one hundred and forty years, gets an equivocal result. American stations, so far as they have been tested, are, on the whole, rather in opposition to those of the Indian Ocean, indicating somewhat less rain than usual during a sun-spot maximum." The above is from Dr. YOUNG'S work, from which we take, also, the following: "The latest, and one of the most interesting, of the essays in this general direction, is that of Professor JEVONS, who seeks to show a relation between sun-spots and commercial crises. The idea is by no means absurd, as some have declared, it is a mere question of fact. If sun-spots have really any sensible effect upon terrestrial meteorology, upon temperature, storms and rainfall.

they must indirectly affect the crops, and so disturb financial relations; in such a delicate organization as the world's commerce, it needs but a feather-weight, rightly applied, to alter the course of trade and credit, and produce a 'boom' (if we may be forgiven the use of so convenient a word,) or a crash."

Mr. MELDRUM'S observations have shown that the rainfall maximum for the world occurs about a year after the sun-spot maximum, though the variation is great in different localities. Whether we receive more or less heat from the sun during periods of great solar activity, or when sun-spots are most numerous, has not been positively determined. The past two years of average low temperature on this continent, in connection with numerous sun-spots, must be henceforth a recorded fact. The records for the same time of the great rainfalls that have flooded vast tracts of land in this country and in Europe and Asia, when compared with the prevalence of sun-spots at the time of their occurrence may possibly be fruitful in desired information. One of the most persistent and careful observers of sun-spots in this country, Mr. H. C. MAINE, of this city, an associate editor of one of our daily papers, has through this medium from time to time, made public the arrival and passage of the largest sun-spots, and has also made predictions with reference to them in regard to approaching storms, that have been verified in a most remarkable manner. At present but few of his notes on this subject have been given publicity, although of high interest. Evidently there is much probability that sun-spots constitute a factor in the changes of the weather, and that at a period not remote we may be able to calculate its value. As cultivators of the soil in capricious climates, we must make preparations for raising our crops in the highest perfection in seasons that are both favorable and unfavorable, in seasons unusually wet and unusually dry, unusually warm and unusually cold. The basis of all good culture is a soil that can quickly pass off an excess of water, and into which, in time of drought, the roots of plants can penetrate deeply. Underdraining and deep tillage will give these results on soils that would otherwise be almost valueless in seasons of extremes.

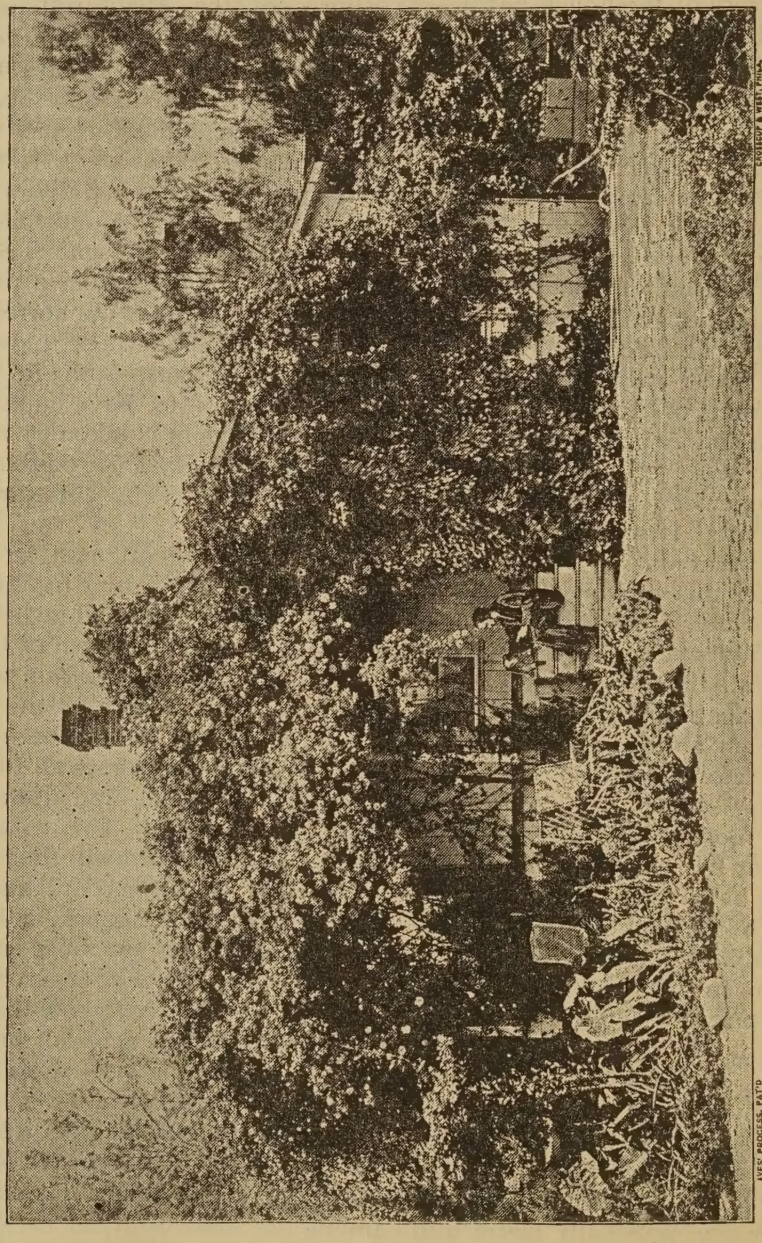
A CALIFORNIA FRUIT FARM.

Our readers hear enough from various sources to satisfy them that some parts of southern California possess advantages for fruit growing that are unsurpassed, if equaled, any where else on the continent. But we do not wish to make any one discontented with his home, and if all the facts were known it would probably be found that the good and the bad are pretty evenly balanced, and that whatever we may gain in one location over another is at some expense we hardly care to pay. However, fruit-raising is making rapid strides in California, and as a truthful picture of a country home in San Gabriel, we here present a sketch and engraving, prepared from a photograph, of the home of one of our correspondents, ALICE P. ADAMS, whose pleasant writings in our pages, both in prose and verse, most of us have admired. The following account is taken from *A Southern California Paradise*, edited and published by R. W. C. FARNSWORTH, of Passadena.

"An eastern gentleman, smitten with 'California fever,' used to regale his friends with stories of what he would do when he reached the goal of his desires. One of his favorite projects was to 'lie under an orange tree in the middle of winter, when you fellows here are freezing! When I get thirsty all I have to do is to kick the tree, and down comes a ripe, juicy orange!' This sanguine gentleman has since found that the loose pulverized soil in an orange grove is scarcely fitting for a couch, and that fruit-growing in this State must be attended by persevering labor to insure success.

"Perhaps a better idea of the possibilities lying in a few acres of brown loam may be given by a brief description of a ten-acre homestead at the Alhambra. Up to the date of his removal from an eastern city to San Gabriel, the owner had been a merchant. He had worked among the small fruits in his garden for recreation, but knew little of out-door life, and was wholly ignorant of California methods of cultivation. He purchased unimproved land and has tried divers experiments, many of them proving to be worthless, but his place shows what can be done in six years by a person having no previous knowledge of

fruit culture. He has five acres devoted to citrus fruit, in all about twenty varieties of Oranges and Lemons. The former vary in size from the Navel, of which he displayed a specimen measuring sixteen and a half inches in circumference (this is extraordinary size, however,) down to the dwarf Chinese Mandarin an inch or two in diameter. His Lemons are chiefly Eureka and Lisbon. He does not grow the common seedling or Sicily Lemon. His Orange trees are all budded varieties, and are about six and a half years old. They have been set nearly six years. He estimates his Orange crop for the present season at from three hundred to four hundred boxes. He has a two acre vineyard of the Muscat of Alexandria Grape, and has made raisins the past two seasons. Two acres are devoted to deciduous fruit — Apricot, Nectarine, Peach, Plum, Apple, Quince, Cherry, Fig and Japanese Persimmon. Of small fruits he has Blackberries, Raspberries, Gooseberries and Currants. He has planted the Cuthbert Raspberry largely, and picked berries from his bushes until the middle of January. In autumn the Strawberry Guavas are laden with delicate fruit, and the Loquat matures its yellow treasures in the spring. The only varieties of nuts on the place are the English Walnut and Pecan, the last is not in bearing. Half an acre is sown to Alfalfa, and this supplies



A CALIFORNIA HOME.

a horse and cow with green feed the year round. The owner has Pepper and Eucalyptus trees that he raised from seed; the latter are from seventy to eighty feet in height, and the largest measure four feet and a half in circumference. He has also a flourishing nursery of seedling Orange trees that he intends to bud the coming season.

"The mistress of the house has nearly one hundred varieties of Roses, the majority being of the hybrid perpetual and ever-blooming classes. Many of them she has grown from cuttings, or has budded on stock of vigorous habit. Her Lamarque Rose, which clambers on the roof at will, has a trunk fifteen inches in circumference; and in March or early April, according to the season, when 'the valley holds its feast of Roses,' the cottage gable is hidden under the creamy Lamarque clusters, the scattered wealth of the Gold of Ophir, and the heavy crimson buds of the James Sprunt, all growing on the same stock. An Abutilon is a tree twenty feet high, and the English Ivy, a tiny plant when set out, drapes one end of the house, and grows forty feet under the veranda roof. The Narcissus gives a constant succession of blossoms for over four months. Most flowers and shrubs do well here, though the Fuchsia does not attain the perfection of luxuriance that is seen nearer the coast.

"Any person possessed of a moderate income may have as pleasant a home as the one of which brief account has been given, and in starting a new place at the present time one would have the benefit of his neighbors' experience, and might avoid many of the blunders they had to correct.

"East of the Alhambra are many fine properties, somewhat older than the new settlement. Here is the picturesque Episcopal church, and near the Rose estate stands a white-walled schoolhouse with a broad veranda. South of the Mission and beyond the railroad are other pleasant homes, though the lands in this vicinity are better adapted to vines and grain than to citrus fruit; hundreds of acres have been sown to Wheat and Barley this season.

"Many extravagant statements have been made concerning this locality, conveying the impression that frost is unknown, that no fires are needed except for cooking, that it always rains at night, that it is never uncomfortably warm in summer, and various inaccuracies tending to give a false impression of the country. The residents of San Gabriel do not claim that their climate has no discomforts, but they maintain stoutly (and numbers in their travels have sojourned in the 'sunny south' and on the shores of the Mediterranean) that no clime has fewer. If LOWELL had lived in this valley he never would have written:

> 'And what is so rare as a day in June?
> Then, *if ever*, come perfect days;'

for scores of perfect days come at all seasons of the year, days which fulfill one's utmost desire, when, idly swinging in hammock or swaying in rocker, one casts away all care and peacefully enjoys the lovely landscape, looking over the broad belts of verdure to where

> 'Far, vague, and dim
> The mountains swim,'

or on the nearer ranges, their rugged outlines softened in the mellow light, while 'overhead is a sky as soft, and radiant as the eye of childhood,' and all one's tranquil thoughts are attuned in harmony with BUCHANAN READ, when he sang:

> 'With dreamful eyes
> My spirit lies
> Where Summer sings and never dies—
> O'erveiled with vines,
> She glows and shines
> Among her future oil and wines.
> * * * * * *
> 'No more, no more
> The worldly shore
> Upbraids me with its loud uproar!
> With dreamful eyes
> My spirit lies
> Under the walls of Paradise,' "

The volume from which we have so freely quoted gives very detailed information in regard to much that is desirable to know of the Pacific land of flowers and fruits, by describing homes, farms and tracts in different localities; still, the more we read, the more impressed we become with the difference in soil and climate from ours, east of the Mississippi, and the consequent different modes of practice in all agricultural and horticultural pursuits, especially is this the case in southern California. To understand that country, evidently one must go there and spend some time in careful observation. The experienced cultivator here would find much to learn and many new practices to adopt.

THE CHINESE SNOWBALL.

Of all the species and varieties of Viburnum worthy of cultivation as ornamental plants, and they are many, none has received more attention than the common Snowball, or, as formerly more frequently called, the Guelder Rose, a sterile variety of Viburnum opulus. This old garden shrub, producing its white balls of blossom in spring, is probably as

VIBURNUM PLICATUM.

popular now, and perhaps more so, than ever before, and this, notwithstanding the many varieties of handsome shrubs our modern gardens boast. The somewhat straggling and irregular growth of this plant is not pleasing in the sight of some eyes, though we think correct artistic taste would find in this no cause of offense. However, nature in her many moods fashions with a free and easy hand and molds in diverse contours. In the Chinese Snowball, Viburnum plicatum, we have a plant producing the same white balls of bloom as the Guelder Rose, and in as great profusion, but the plant itself is more erect and symmetrical in its growth; a marked feature of this species is its peculiar leaves, which have an appearance as if they had been folded, and it is from this characteristic that it has received its specific name, plicatum, plicate, or folded. It is commonly mentioned as the Plicate Viburnum. One cannot fail to admire the foliage, which is certainly beautiful, and in time will probably give it the preference over the old variety. The bush probably does not grow quite as high as the common Snowball, but on this point our experience does not admit of writing with certainty. It appears to thrive as well and to be as easily suited with soils and locations as the old favorite. It is quite hardy, and will eventually find its way into the best gardens.

THE BOUVARDIA.

The Bouvardia is one of the most useful of winter-blooming plants, and florists raise it in great quantities. Plants struck from cuttings early in the spring, after being grown on in small pots until they are vigorous little specimens, may be hardened off, and then be planted out in rich soil in the open ground during summer. Early in autumn the plants should be lifted and potted and set in the shade, watered, and the foliage syringed; when fully established, place them where they will have a moist atmosphere, a good light, and a heat of 60° to 70°. In warm localities they can be left in the open to bloom during the fall. Like most other plants this has its insect enemies, and the cultivator must employ his skill and the proper remedies for the destruction and prevention of green-fly, red spider and mealy bug.

The varieties represented in our colored plate are among the finest of the single, colored kinds. The flowers of the Bouvardia have a pleasing fragrance, and, being of considerable substance, retain their form and remain in good condition for a considerable time; they are gems in bouquets, and of the highest value in all flower work. The new double varieties, both white and pink, lately originated, add much to the interest of this family of plants.

MID-OCTOBER.

Oh, the matchless splendor of these autumn days!
Nature, at her carnival, her richest robes displays;
Every leaf, a-tremble 'mid the foliage bright,
Seems alive and quivering with a keen delight.

On the leafy carpet hear the Chestnuts fall;
Scarlet vines run riot o'er the low stone wall;
Golden Rod and Aster, filling all the place,
Nod, and smile, and beckon, with a noisome grace.

Every shady hollow flames the Sumach's light,
Beacon torch of Maple waves from every height,
Climbing up the hillside see the ranks of trees,
Plumes of gold and crimson, tossing in the breeze.

Scores of ruddy Apples dot the orchard grass,
Purpling through Grape clusters rays of sunlight pass,
Mellow Pears drop lightly to the lifted hand,
Quinces gleam like fruitage of Hesperian land.

Oh, the matchless glory of these autumn days!
Nature's mood of gladness the dullest spirit sways;
Thought and fancy, kindled by each sound and sight,
Wake to life, rejoicing with a keen delight.

—Mrs. D. M. H., *Lincoln, Ill.*

GETTING READY FOR WINTER.

By the time this gets into print it will be time to think of cold weather, and to get ready for it. I believe in being "in advance of the season." It pays, always, and especially when tender plants are concerned. I have several times kept plants in a room which I knew was too "airy" for our most severe winter weather. I would remind myself that I ought to go over the windows and make them snug, but, alas! the evil spirit of procrastination would whisper in my ear not to do, to-day, what might be done to-morrow, and I would neglect the work that a regard for my plants ought to have made me perform, and a cold night would come, and in the morning the plants would be found frozen. Then there would be great sorrow, when it availed nothing, and much self-reproach, but that couldn't help my poor flowers any. I would make up my mind at such times, never, never let such things happen again. But I am sorry to say that it took three lessons to reform me.

Most windows in which plants are to be kept through the winter need attention before cold weather comes. The glass will be loose in the sash, and the sash loose in the frames, very likely; there will be cracks between the sash, and very likely between the frames and the plastering. Every little crack and crevice will admit cold air, and a number of these will be sure to let in so much that the plants will be severely injured on cold nights, if not killed.

It is a good plan, therefore, to go over all the windows where you intend to keep plants before cold weather is upon us, for, probably, if it is neglected till that time it will never be done, and quite likely, after a little, it will not need doing. Take out all broken glass, and put in whole panes, and see that there are no broken places in the putty, at least once in two years, and put on new. Fasten the sash in the frames so that there will be no rattling, and then take strips of stout cloth and paste smoothly over every crack, if it is large. If small, a coat of paint will often fill it up, and not be as noticeable as the cloth, but if pains are taken, the cloth need not be made unsightly. If strips are pasted on, put some glue in your paste, for the action of moisture which will result from thawing of the frost which will accumulate if you make your windows light, will loosen anything fastened with ordinary flour or starch paste. If the room is to be re-papered, cut strips of cloth and go over the frames where they and the plastering come together, before the paper is put on. If already papered, you will probably be able to find enough paper like that on the walls to close up all these crevices. Papering cracked walls

will keep out a great deal of cold. If badly cracked, always paste on cloth over the cracks before hanging the paper. Cloth is preferable to paper over cracks and holes, because it will not break easily from pressure or strain. There is very often a crack between the floor and base boards where a good deal of cold air will find its way in, making it unpleasant for the persons who occupy the room as well as for the plants. It is always better to close these lower places where cold air can come in than those above, for the reason that the warm air will rise and neutralize the cold air which may be admitted through cracks and crevices in the upper part of the room. If the doors have shrunk, tack on pieces of listing or felt until they fit snugly in their frames. If the floor is worn and a carpet is to be used, put down one or two thicknesses of building or sheathing paper before laying the carpet. This paper, tacked securely, will keep out a vast amount of cold, if there is any opening in the floor. I have plain oil cloth shades hung in every window, close against the sash, and these are drawn every night in winter, and the plants which stand on tables with castors are moved away from the windows in every room that I do not feel certain is frost-proof. I keep flowers in half a dozen rooms, depending on a large base-burner in the sitting-room for heat. The pipe from it runs through an adjoining room where there is extra radiating surface secured by the use of a sheet-iron "drum." The other rooms opening off the sitting-room, being smaller, are warmed by the air admitted through the doors, which are not closed at night. I shake the fire down just before going to bed, close the dampers, and always find the rooms warm in the morning. Many persons depend on small base-burners to heat a large amount of space, and often plants in adjoining rooms are frozen. It is good policy, I think, to get a large stove. A large stove can be regulated so that it will not give out more heat than is wanted, and, if occasion requires, you can bring on "reserved forces," and that you cannot do with a small stove. I keep a vessel of water standing on the place for a kettle, between the magazine and pipe, and the evaporation from this and from the soil in the pots and the sand on which they stand, which is thoroughly saturated every morning, together with the frequent sprinklings I give them, destroys all the bad elements of coal-heated air, and my plants are as healthy as any I ever had with wood fires.

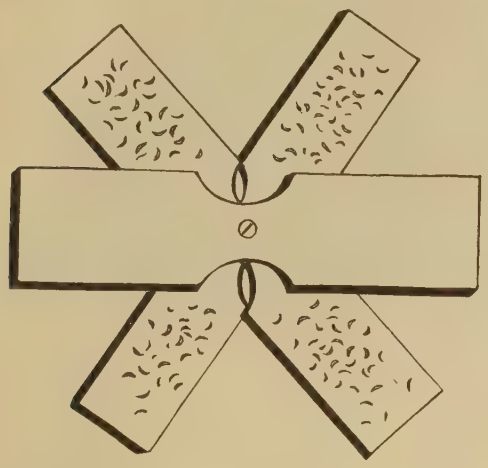
It must not be inferred from the above that I would cut off all supplies of fresh air. I would give plenty of it through opened doors, but not through cracks and crevices.—EBEN E. REXFORD.

CODLING MOTH AND BACTERIA.

Who is there that has fruit trees that has not suffered, more or less, from the ravages of the codling moth? and who has not witnessed, with pity and remorse, the devastating power of bacteria? Both, as it were, invisible agents, yet how vast the ruin they bring; in the one case, every fruit punctured and an egg deposited during the darkness of night, rendering them almost worthless, and in the other, the most promising and fruitful limbs falling a prey to our insidious and microscopic foe. Knowing the great importance of this subject to fruit growers, I venture to give a few hints from my own experience in the treatment of these two pests.

The codling moth begins to work very early in the season, soon after the fruit trees are in bloom, puncturing the pistil tube, and with her ovipositor depositing her egg in the ovary of the embryo fruit. This fruit so punctured falls from the tree long before it arrives at maturity, in fact, when the caterpillar is full grown and ready for the pupa state, as it then eats the vital part, causing the fruit to fall to the ground. Now is the time to destroy them; if the fruit be left under the trees the caterpillar creeps out, gets to the trunk of the tree, creeps under the scaly bark, weaves a cocoon and undergoes its further metamorphosis. My plan is as follows: At the end of July I obtain some old shingles, put two together by a screw in the center, place one, two or three against every tree trunk, according to the size, and the worms, finding a place so convenient for them, creep between the boards to make their cocoon in preference to the bark of the tree, and so can be caught and destroyed. Now, in an orchard proper, pigs may be turned in to eat up the fallen fruit, and in a garden they ought to be raked up and destroyed; if this is done by every one

we should soon greatly modify the ravages of this pest if we did not exterminate it altogether. Last year I destroyed



CODLING MOTH WITH COCOON TRAP OPEN.

some hundreds of cocoons in this way, and when one comes to consider the thousands of eggs these hundreds would have produced, one feels encouraged not only to persevere himself but advise others to do the same.

Now, as regards bacteria, Pear blight, or yellows, or what so ever other name it is known by. Here we have rather a harder task before us, as from my observations on that and other cryptograms and fungi, I am convinced that at certain seasons the air is full of their living germs, and they only want favorable circumstances to cause them to take hold and become a sort of wide spread scourge, almost to the depopulation of our orchards. I cannot say that I am satisfied with all my conclusions as yet, but I venture to ventilate them as far as I have gone, hoping it will, at least, incite some one else to take the study in hand.

In the first place, then, we are not half careful enough in gathering our fruit. We let our garden hands, or rather feet, get up the trees in whatever sort of boots, shoes, or high-low-jacks they may happen to have on at the time; no matter whether they may have pegs, screws or ten-penny nails in the bottoms, up they go, regardless of expense or the feelings of the trees; crash go those implements of torture through epidermis and liber, laying bare, in many cases, the cells and tissues of the alburnum, often to the length and breadth of several inches. Here is a congenial and ready made home for the bacteria, and in very many cases that have come under my own ken they have not been slow to avail themselves of it. Mark me, I do not say this always follows, but I do say that times and again I have noticed, on both Apple and Pear trees, after the outer bark has been lacerated by careless fruit gatherers and pruners, the limb has eventually been destroyed by bacteria. Treat your trees tenderly and they will pay you better; make your pruners and gatherers wear overshoes, or something soft, and you will find you do away with one fruitful source of the evil.

Another great source is badly ripened wood. If we could get strong, well-ripened shoots, there would be little fear of what is called twig blight, which is the same evil under another name. When the current year's growth is green and sappy, the hard frosts and sudden thaws of early winter split the bark and liber, thereby giving entrance to the microscopic germs of bacteria. My remedy for this is spurring, or summer pruning. The end of July, I generally put two men to cut back all the present season's growth, except the leaders; this causes the fruit to be borne on spurs, and gives the fruit fine and well flavored every season, in fact, some of my Pear trees have the fruit hanging just like ropes of Onions, and yet I can see fruit-buds forming in plenty for next year. So, you perceive, I gain a good deal by summer pruning; in the first place, I gain a crop every other year, as by my system I have a crop every year. I gain in size and flavor of my fruit, as the crop is not so large, nor the wood so thick, therefore, the fruit gets more nourishment and sun; and I also gain well-ripened spur wood for the following winter, and, as my trees are spurred down the main trunk as well as the branches, there is no climbing after the fruit, and therefore I keep the bacteria out.

I cannot say anything about the yellows, as I have only about a score of Peach trees, and hitherto they have escaped, but I would earnestly impress this great fact upon all interested in this question: Keep the epidermis and liber intact, and, if possible, by summer pruning of the young growth, get hard, well ripened wood, and I feel sure this evil will be avoided in a great measure, if not wholly.—Wm. Hy. Waddington.

LEAF OF CAMPSIDIUM FILICIFOLIUM—NATURAL SIZE.

FERN-LEAVED CAMPSIDIUM.

The Fern-leaved Campsidium, Campsidium filicifolium, is an elegant greenhouse, climbing vine, belonging to the order Bignoniaceæ. It is a native of Chili, where it is said to attain a height of from forty to fifty feet, covering the tops of the trees in a most graceful manner. Although belonging to an order the various species of which are noted for the beauty of their flowers, the Campsidium has no need for them, for the foliage is an ornament of itself, the plant being of graceful habit and the foliage of a dark green color, the whole bearing a striking resemblance, both in size and form, to some strong-growing pinnate Asplenium. The Campsidium is a woody, greenhouse climber, of rapid, yet slender, growth, the flowers are small and comparatively insignificant, and of a rich orange color. It is a plant well adapted for covering the walls or rafters of the greenhouse, or for training in the window garden during the winter, while neatly trained on a low circular trellis it forms an excellent exhibition plant. It is, also, equally desirable for hanging baskets, or for cultivation in the flower border. The Campsidium is a plant that requires but little skill to cultivate it successfully, the only essential point being good drainage, for if the soil is permitted to become wet or sodden, nearly if not all the leaves will drop from the plant to its manifest injury. It does well in a winter temperature of from forty-five to fifty-five degrees, and prefers a compost of two-thirds well-rotted sods and one-third well-rotted manure. It should never be over-potted, and yet, if fine specimens are desired, do not permit them to become pot-bound. In order to cause the plants to branch freely it is necessary to pinch back the leading shoots frequently. When grown in the open air, during the summer season, it should be given a well enriched, deep border, and occasional watering during seasons of drouth. Support must be given as soon as the plant begins to run. It can be planted out in the open air when frosts are past; and if it is desired to retain the plants for another season, they should be well cut back, taken up carefully, repotted, using as small sized pots as possible, before cool weather sets in. When it is desirable to obtain nice specimens for the window garden, young plants should be obtained early in spring, carefully grown on during the summer, and removed to their winter quarters about the middle of September, in order that they can become well established before cold weather sets in.

A SMALL PLANT OF CAMPSIDIUM FILICIFOLIUM.

Water should be liberally given at all times during their season of growth, yet do not permit the soil to become too wet or sodden; the plants also require to be freely syringed or sprinkled in order to guard against the red spider, to which insect it is somewhat subject. Propagation is effected by cuttings, which, as the plant is of rapid growth, will soon form fine specimens, if liberally cared for.

The Campsidium does not appear to

be very particular about the amount of sunshine it gets, it will do well in either sun or shade, but I think that an avoidance of extremes will produce the most satisfactory results, although I have known of instances where it has done well when fully exposed to the sun, but in these instances the plants were well mulched, and liberally supplied with water during hot, dry weather.—CHAS. E. PARNELL, *Queens, L. I.*

TREAT'S ZEPHYR FLOWER.

This plant is a native of Florida, and was discovered only a few years since by Mrs. MARY TREAT, an ardent botanist. It resembles the Atamasco Lily very

ZEPHYRANTHES TREATIÆ.

closely, and without knowing the distinctions one would be apt to consider them the same. Treat's Zephyr Flower has the petals more reflexed than the Atamasco Lily, or, giving it its botanical name, Z. Atamasco. The latter, too, has a more slender tube and peduncle, and the segments are somewhat broader and more acute. The most perceptible difference is in the leaves, which in Treat's Zephyranthes are thick, half round, and with rounded edges, and scarcely more than an eighth of an inch wide, and not shining. The Atamasco Lily has thin, channelled leaves, with sharp margins, and are bright green and shining. The latter is found in a wild state as far north as Virginia, while the other is confined to Florida. The flowers are about the same size in each, pure white, but becoming pinkish with age. Treat's Lily proves to be an excellent plant under pot culture, and will probably become as popular as the better known Atamasco Lily. Where hardy in the Southern States, the bulbs can be planted in the open border, and allowed to remain a number of years. In house culture the bulbs can be started into growth in February or March, and after blooming and ripening the foliage may remain dry and at rest in the pot until another winter, and then, without repotting, the upper or surface can be removed and replaced with some that is fresh and rich.

ONION SEED.

The quality of Onion seed is a thing very much criticised by growers, and often with justice. But recent walks back and forth across a large piece of Onions has caused some reflections in my mind on the subject, that may be worth jotting down as evidence that the difficulty is not always in the seed. The field in which the Onions, Yellow Danvers, are growing, slopes slightly to the south, and has little elevations of a foot or two in various places. It has been planted to Onions several years and well manured. The seed was of choice quality, grown by one of the best growers in eastern Massachusetts, but there is a plain and great variation in the Onions, which is as plainly not due to the seed. In one corner, where a few loads of slaughter house compost was applied, the growth is rank, and thick-necks very plenty. But there is hardly a thick-neck in any other part of the field. On the tops of the little elevations, being dryer than the rest, the Onions are almost as flat as cracker Onions, though of fair diameter. At the bottom of the field, where the rain has washed out the earth between the rows, the Onions are quite small. But in most of the field the crop is superb in quality and yield. Now, if either of the poor spots had been the only part of the ground sown to Onions, would not the seed have been unjustly condemned?—T. H. HOSKINS, M. D., *Newport, Vt.*

A HOME GARDEN.

That gardeners are always grumbling at the weather is a slur I wish to disclaim for once, as lovelier days never dawned than this August month with us, and the garden owners of this gardening neighborhood on the hill concede that it is very suitable for the time of year, and go so far as to allow that it has been a very encouraging season. After the dashing rain of the last week in July, in place of the dreaded dog-day heat, August enters into the charm of October, warm and sunny, but not over warm, with light airs and a sky in haze to the zenith, cool nights and heavy dews, all favorable to garden operations that eager amateurs wish to see pushed at once. July is a heart-breaking month to those who love gardening, especially in this State. The regular Massachusetts drouth parches the soil, kills seeds, or, if by patient care, you succeed in getting them up, an unwary hour of morning sun scorches the seedlings; plants barely hold their own without flagging, thanks to shading and watering, but refuse to grow; Roses turn yellow and shed their leaves, Pansies are nowhere, Nasturtiums turn sick, vines on the south side of the house, when you want vines most, cling in a despairing way, and spite of water, shading and fertilizers, refuse to grow a yard. In all my garden experience, which began at ten years old, I never had so many failures or such bitter trials with plants as this first summer's real gardening in Massachusetts. How I have looked back to deep, mellow soils of Indiana and the prairies, and the rich Long Island tilth where we may all but rival California in flower growing, or the warm, quick Jersey farms, anything, anything but the stubborn clay loam with under soil of pebbles. But I made my vow that grim soil should grow plants and under these hands, too, and I will say that the summer failures taught more than any success could have done. If I take readers with me in some of these lessons it is because good things are not to be kept to oneself, and because I would spare some other beginner the regrets that have been my portion.

A better site than the garden could hardly be asked, on the brow of a gentle rise, sloping southeast, and reaching almost to the edge of woods on the north and northwest. It was laid out some six or eight years since by the owner, a rich man, who reclaimed it from the bush, and spared no expense in grading, planting and enriching it. The garden and orchard are laid out together, which answers very well now, with young Apple and Pear trees twenty to twenty-five feet apart, and Strawberry and vegetable beds between the rows. It is the old aristocratic idea of a garden, though sorely degenerated, the orchard garden, which it will be sweet life work to restore to the ideal, the oblong "planted with Apples, Myrtles, Pears, Pomegranates, Olives, Figs, and the tall vine, divided by paths, and the branches of the trees entwined above, forming a continuous arbor, where Roses and Hyacinths were planted and tended; the ground itself yielding the Violet and Narcissus, where were shade in summer, sweetness of flowers in spring, the pleasures of vintage in autumn, and fruits in every season of the year." This was the description of an old Greek garden, two thousand years ago, but what is there in it we may not have in Massachusetts? Changing the Peach for Pomegranate, Plums for Figs, and one dozen native berries for the Olive. The original Eden idea of gardening in which fruits and flowers were combined has been the model for all those times in which gardening was most cherished, from the first garden, dear to us all, to those of Lord BACON and Sir WILLIAM TEMPLE, the kingly gardens of Italy, France and England, the gardens of CHAUCER and SHAKESPEARE, which English good taste determines to restore with other excellent and old fashioned delight. Withal, this plan of the English garden so answers our wants and needs in this capricious climate that I am sure it will be accepted even more eagerly in America. Its suitability is seen from the fact that I had planned much such an enclosure before the charming books of English writers on the art of gardening came into my hands, like all the best things, it has grown out of simple weeds.

What is to be done with the stone from the place, was a question which came up, seeing the piles left by former workers and those which grew daily. One heap, twenty feet square, disfigured the pretty thicket near the house, a second spoiled the Birch covert next the barn; to make

a third was hideous. When the stone is all out of the soil this garden will be two feet lower than it is now on a level. But we will have use for every stone; in the first place, to build a house, in the next, for a wall round the place, high enough to afford a warm border for early Crocus and Snowdrops and Strawberries, wall space for trained fruit trees, where Roses and Woodbine may run riot, and where one may be sure of a sheltered walk in winter noons, with, perhaps, a brave Pansy or Christmas Rose peeping from the soil. A wall of stone laid in coarse mortar may cost more than a cheap board fence at first, but will be cheaper in the end, as never needing paint or repair, it will give our garden a fortnight more of growth and glory at each end of the season. I have hopes of being able to cheat winter out of the dreary claim he has upon half our Atlantic year, and contest every day beyond the three months of which he holds title. An advantage of the orchard garden is that the boughs afford a little protection from frost to the plants under them. With a wall, how easy to shelter the four borders, and with screens of five-cent cotton hooked like awnings to the stones to keep Tomatoes, Okra, and late Strawberries in fruit till nearly or quite Thanksgiving, while cold-pits would keep them till Christmas, unless it were a severe season, without expense of glass or heat. There are so many luxuries in reach in this world, with forethought and providence.

The slipshod, American way of living is the most expensive known in civilization, for the family gets the least for its income. A poor German will have his hot-bed and cold-frames, his garden beds like velvet, and his arbor to take tea in, among his great Roses and Pansies, where he listens to the bees' hum in the Mignonette and the drop of his golden Pears; he will have his fresh salad and Celery on Christmas, and Primroses and Strawberries before any one in town, while his American neighbors, with thrice the spending money, are content to live in a starveling lot with some barren Pear trees and wormy Currant bushes, and buy just vegetables enough to make sure of cholera morbus when the season comes round. I can hear the criticisms on our stone wall which will pass at the station and the shops, when the first rod is laid. So old fashioned! nothing genteel, like a tasty iron railing or a nice white painted picket, or a fancy rustic fence! Looks like a pasture lot enclosed! But where stone is found in quantity, I can't conceive any thing so substantial, protecting, and in keeping with good taste as a four or five foot wall, with coping, over which the vines hang. No tint relieves the green of lawn and boughs like that of gray stone, and the rougher it is built the better.

For summer gardening in its prime, one must provide shade, and this the orchard garden provides in perfection. The end of the Strawberry beds that came under the shadow of the tall Oak bore the finest fruit of the season, and so did the edge which came in the shade of the young Apple trees. The plan for next year's garden, now being laid out gives a three foot border in line with the trees, east and west, to be filled with Raspberry, Blackberry, Currant and Gooseberry bushes, trained, pruned and cultivated, in short, not left to grow a choked and straggling mass. North of these lines, the herb border, flowers, Lettuce, and all salads will find the partial shade they love, while the Strawberries fill two narrow beds in the middle. The berry bushes do not need the constant cultivation of garden crops, which is no benefit to trees in bearing. The herbs and perennials are quiet plants, likewise, and by placing all these next the trees, with paths adjoining, they get a seven foot border, with no more stirring of the soil than is good for them, which is vastly better than growing Beets and Cabbages up to the trunks. In time I see the Rose arbor reaching down the middle alley, and the fragrant wild Grapes, which are set out and growing, perfuming their chosen corner, while plots of gay garden flowers in front of the Blackberry trellises show off their best against that beautiful Briar. A broad cement walk goes round the whole, well underdrained to be sure of dry footing in all sorts of weather, and outside this, against the wall, is to be the five foot border, as full of choice and sweet things as the soil will carry.

I am planting this garden for my old age, and I feel it, year by year, growing my world. The walk is to serve a double purpose, that of a retired and sheltered

place for exercise being chief. In common with most women, I have stayed indoors too often when paths abroad were muddy and sloppy, or the fatigue of dressing and putting on a street face, was too much for strength and spirits, for my good, and I desire the rest of my life to have scope for as much out-door life and sunshine as days allow. The sweet privacy of that garden limit, defended by its walls will be worth all the rest the world can give. Why should we not have houses with lattice sides as well as gardens with no better fences? As for the benefit of the public, I can grow enough Roses and Wallflowers on the top of my stone wall to please them, and I know all the women in town shrink from working much in their gardens, because they are "in sight of the whole neighborhood." When they get out there is so much attention paid to attitudes with the watering pot and dainty handling of long-stemmed flowers, I doubt that the exercise does them as much good as if they felt themselves secure from observation. The time will come when walled gardens are again common through the North, we, in the East, building them of stone, while on the prairies, where one must hunt for a stone large enough to drive a stray fence rail, or to throw at a dog, the wall must be a living one, a thick set hedge of Thorn, Osage Orange, or Barberry, at least, a screen of Ozier, that will turn the wind. The advantage, once tried, will make the fashion a permanent one.—SUSAN POWER.

TRANSPLANTING FRUIT TREES.

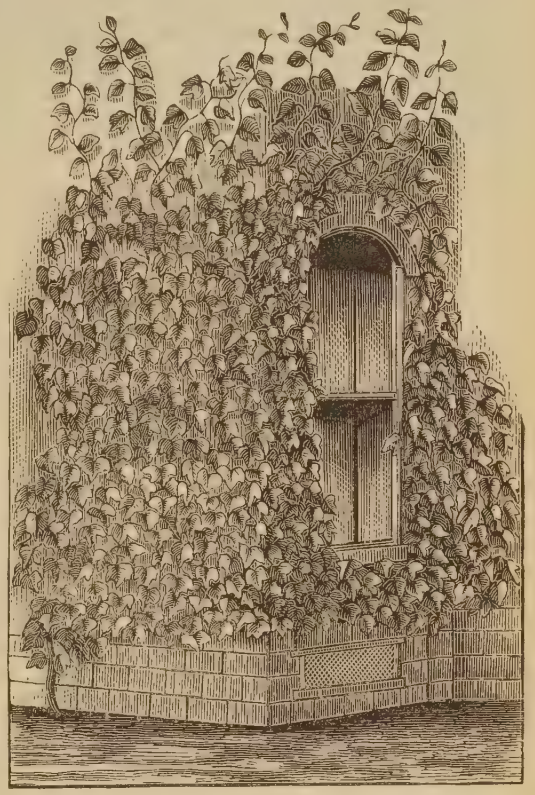
I am so frequently asked as to the proper time and manner of planting fruit trees that I thought I would send a few remarks on the subject for the MAGAZINE.

First, as to the proper time. I find that here, in Canada, planting is always done in the spring, whereas I would throw all my weight of opinion in favor of fall planting, and for this reason. If planted at the right time there is enough sap in the plant to cause it to make fresh roots and get thoroughly established in its new quarters before winter, so that it is prepared to start at once into growth in spring, and continue that growth without any check during the ensuing summer. It is far otherwise with those planted in spring; let them be taken up ever so carefully some of the roots and rootlets get broken, crushed and destroyed, and as they cannot be planted before the ground gets warm and pliable, in nineteen times out of twenty the buds swell and burst before they have made any roots, or even before the old roots have taken hold of the ground. Hence, failure to meet the requirements of the growth, failure of sap, means failure of foliage and growth, and very often failure of life. The best time for lifting and transplanting I have found to be when the sap is descending, in other words, when the leaves begin to assume the russet, and I would advise, where practicable, the purchaser choosing his own trees, marking the north side of each, and also the ground level, watching the process of lifting, as nursery laborers are not generally very careful when an interested eye is not on them; have them at once dipped in a composition of soot, cow manure and clay, yclept, "puddle," and carefully packed and conveyed to the planting ground. This ought to have been thoroughly plowed, harrowed and cultivated beforehand, and a stake or peg placed where each tree is to go. Now get two careful workmen, if obtainable, or one and self, dig the holes, making them slightly round in center, take your tree, placing the north mark to the north, and when finished let it be the same depth as before, carefully spread out all roots and rootlets, and insinuate fine soil amongst them so that no two are together, fill in about six inches and then tread firmly, and when within an inch or so of the surface give a can or two of water, put a good stake to each, tie firmly, head back the growth to three or four eyes, fill in soil and top-dress with a mulching of litter, get a piece of old stove pipe and bend it round the base of the stem, and you need not be afraid of mice during the winter. But you will say, "Why go to so much trouble? Why make so much fuss over planting a few fruit trees? Why not go on in the old shovel-and-heel practice so common?" I will tell my reason. There is an old proverb which says, "If a thing is worth doing at all, it is worth well doing," and on the common ground of economy it is worth well doing. Say fifty fruit trees at fifty cents each, cost twenty-five dollars, and a man's time, putting in two to four dol-

lars, this is to say nothing of your own time, nearly thirty dollars; well, a pretty good average of living trees, according to the old method, at the end of the first season, would be thirty out of the fifty, but if you lift carefully, and plant carefully, you will seldom lose a tree, so that on this count it is a clear saving of ten dollars. But it has another aspect. They say "a bad workman always blames his tools," and I know a bad gardener always blames his seed, and I suppose most everybody, from Adam onward, is given to shift the blame of failure on to some one else, and so the poor nurseryman, who supplied the trees, generally gets blamed for failures, often to the extent of doing his business great injury. You let a man lose in any section, and let him go about saying, "I'm not going to get any more fruit trees, &c., from so and so, I got a lot last spring and most of them failed and died," and people will not think for themselves in these matters, or the failures might easily be traced home to the grumbler and his method of treating the trees, and I will wager that the nurseryman so slandered, don't get many sales in that section that season. Now, this is a decided wrong.—Wm. Hy. Waddington.

JAPAN AMPELOPSIS.

I send a sketch of my Japan climber to show the readers of the Magazine how perfectly it covers the wall of my house, which is brick. It clings to the surface with great tenacity, and requires no fastening whatever. It is quite hardy here, and stands entirely unprotected during the severest weather. The south and the east sides of the house are nearly covered by two plants which are now six years old, the space occupied by each vine being about five hundred square feet. The first winter after planting, the vine on the south side winter-killed nearly down to the roots, but two or three buds pushed in the spring, and after that it was safe. The south is the worst exposure possible for any plant in winter; the north and east sides of a house are most favorable. Not far from me a neighbor has a plant of this Ampelopsis which has been planted about ten years, and now covers more than a thousand square feet of wall. The foliage colors very beautifully in autumn, and remains on much longer than that of the Virginia Creeper; it drops only after quite hard frosts. The foliage is very close, and the wall is entirely hidden by it. There is no naked length of stem. The old wood forms



WALL COVERED WITH JAPAN AMPELOPSIS.

little spur-like branches that increase in length almost imperceptibly from year to year, and each season they are newly furnished with leaves. The leaves on these spurs will measure five or six inches across, while a good size for those on the current year's growth of terminal branches is only about two inches. On most plants we find the largest leaves on the new growth of wood, but this, I suppose, is a Japanese notion, and a very good one, too.—P. B. B., *Rochester, N. Y.*

Grapes on Canandaigua Lake.—From the general destruction by the frosts, the past week, I am happy to say Vine Valley has escaped without a scratch. On a recent visit up Keuka Lake, I found the Catawbas badly rotted and still rotting. The report from that section is that the late frost has done much injury. Delawares are now being shipped daily from this Valley, selling from $8.00 to $9.00 a crate of thirty-six pounds; nor, are they likely to go very low this season.—H. G., *Vine Valley, N. Y., Sept. 12th, 1883.*

GARDEN ART.

A writer in *The Garden* gives an account of the garden of Mr. FRANK MILES, an English artist of some fame. A portion of this account we lay before our readers for the purpose of presenting a view of a style of gardening seldom seen, but altogether desirable, and which only one can execute who, like a musician, a poet, a painter, an artist in the highest sense, and in his best efforts, is dominated with the truth and beauty of his subject.

"It is impossible to conceive a more congenial home for an artist than Bingham. The garden seems a poem, the house a picture, to which each member of the family has apparently contributed their various quotas of light and shade; and the output is a peaceful, restful, beautiful home, in which art and nature meet together, and, as it were, melt into one another.

"The charm that enchains us most in either picture or garden is born of that touch of genius that molds and combines, contrasts and harmonizes all the perfect parts into one yet more perfect, complete, and satisfying whole. I must confess that it was this unity of expression amid an almost infinite variety of detail that affected me most powerfully and pleased me most at Bingham. Nature seemed in everything and everywhere to reign with such apparent and absolute liberty, as to conceal the art that obviously underlaid and to some gentle extent restrained her waywardness and reined in her freedom. The predominance of nature was obvious at a glance; the art was so subtle as to almost evade detection.

"It is well to bear in mind that mere trimness is not art any more than geometrical lines form a picture, and hence the easy flowing grace of the natural style is far more artistic than the rigid formality of, say for example, carpet bedding. It would almost seem as if some writers confounded the two words, artificial and artistic; whereas the more artificial, the less art, and *vice versa*. Art may be said to reign supreme in this garden, not only in its form and disposition, but in the mode of its furnishing; for example, the richness of the feast of Lilies was greatly enhanced by the mode of their arrangement. Taking broad views and writing in general terms, the foundation of the feast was laid with white Lilies. These overspread the greater part of the garden, forming a ground color of spotless purity, on which the more rare species were splashed in, like islets of brightness and beauty on a silvern sea. And such happy contrasts and skillful correlations of parts to wholes pervade the entire garden. No part or class of plants, however beautiful, seems to be left to stand alone. Each family of plants is linked on, as it were, to that which preceded it, and also to that which follows after; the beauty as well as the life is thus, as far as possible, made perennial, perpetual. Each series of plants, as they are marshalled in in orderly succession, nurses, strengthens, brightens the effect of, and prepares the way for those that are to follow. Thus light and shade, ground, or neutral tints, and brilliant masses of coloring are seldom wanting in such a garden. It is thus that the true artist makes use of each series of plant life to give new forms and fresh coloring to the living picture that his genius is forming in the garden instead of painting on canvas. One of the faults as well as the perfections of the latter is that, however beautiful, it must necessarily be stereotyped—finished. But the garden picture changes almost every day through-

out the year, and he is the truest landscape gardener, be he painter, poet or horticulturist, who can so form and furnish a garden that it shall provide a feast more or less full of perpetual beauty to enchain the eye and satisfy the heart all the year round. Probably few gardens would do all this more effectually than that of the old rectory garden at Bingham. And yet in itself and its surroundings it is most common place—a flat quadrangular piece of ground, tolerably well furnished with trees, consisting of lawn, kitchen garden, orchard, flower garden, and a small pond, with not a single object of interest beyond its boundaries but the tower of the church close at hand. Neither is there any attempt to counteract, by artistic forms of flower-beds or borders, or highly finished furnishing, the humdrum character of its surroundings. A couple of raised beds on the little lawn in front of the drawing-room windows, formed into different zones, with tiny walls of the common wood Ivy, furnished on the mixed style, the chief and most conspicuous plants being very fine ones of the silvery variegated Coltsfoot, with a raised bank behind, form what may be called the flower garden proper. And yet the richest flower garden is not there. It is spread along each side of a long walk that proceeds from the rectory with a gentle sweep towards the nuttery and orchard, and may be said to terminate at the pond. The border on either side is about six feet wide, and is backed up with a rustic trellis, over seven feet high, covered with Clematises and Roses chiefly. Among the former are several American species, the all too seldom seen C. Viticella, C. alba, C. grandiflora and C. Flammula robusta. Clematis Sieboldi, still one of the most striking, also formed a conspicuous feature with Jackmani in rich variety."

Here follow descriptions of Roses, and Lilies, and bulbous and other herbaceous plants which must be omitted.

"This rich clothing or screen of climbers allowed to ramble with comparative freedom is not only exceedingly beautiful in itself, but it is most beautiful in adding, as it were, a second cordon of shelter to the choice herbaceous plants and bulbs with which the borders are furnished. So complete and thorough is the shelter provided by this screen and the trees, walls, or other buildings beyond, that it is almost impossible for any rough winds to reach the plants. These snug borders, with a few beds and patches here and there in cosy nooks and corners, provide the base lines for the display of the botanical and floral wealth of Bingham. A casual visitor can get but a meagre notion at the best of the richness and variety of the floral treasures that are either flowering in season, resting after their heyday of beauty is over, or opening their eyes to succeed those that are fading beside or above them. Such borders are like rich mines—the more deeply and persistently worked the richer the treasures they yield.

"Altogether, Bingham garden is the best combination of what, for lack of better terms, may be called wild and tame gardening that has come under my notice. The almost unchecked luxuriance of most of the plants but added to the effect, and proclaimed to all beholders that there at least the plants, and not the hard and fast laws of the trim cultivator, were masters of the fortunate bit of earth they so fully filled and so richly adorned."

SIMPLE GRAPE CULTURE.

Some of our readers who may wish to try a foreign vine on the end of a small greenhouse, or to have a cold vinery to economize a small space where a wide border cannot be made, but where the roots can have plenty of space to run, may be encouraged by the following experience of a correspondent of *Gardening Illustrated*.

"Mr. GROOM, in his article on the above subject, says: 'In the most successful cases the roots have had free run.' A case has come under my observation in accordance with his statement. About ten years ago, a gentleman decided to have a vine trained to the roof of his greenhouse. The old gardener said that it would never answer, as there was no room to make a prepared border, there being only a small strip of border between the greenhouse and the garden walk. The gentleman would have his way, and a Black Hamburgh vine was planted. Three years ago it covered the whole roof, and it has every year since its commencement to bear borne a splendid crop of Grapes, whilst in the vinery,

a few yards distant on the same aspect, which has a prepared border, the bunches are never half the size, and every year shank. The subsoil is a stiff clay. I should have mentioned that at a distance of twelve feet from the greenhouse is a row of Asparagus beds."

PRUNUS TRILOBA.

This beautiful hardy shrub, it seems, will bear a multiplicity of names, though it is now probable that its family relationship is recognized. The name above was given it by Dr. LINDLEY, in 1857, the year after it was introduced into England from China, by ROBERT FORTUNE; in 1862 the plant received critical attention by CARRIERE, the French botanist, and on account of the resemblance of the fruit to the Almond, Amygdalus, and noticeable differences in other points from the Plum flowers, it was renamed Amygdalopsis Lindleyi, the generic name signifying, like the Almond; from Amygdalus, Almond, and opsis, similar. The past season, the botanist and horticulturist, EDWARD ANDRE, has made it a subject of examination, and arrives at the conclusion that it is a Plum. "But this Plum is extremely curious. It forms a sort of chain uniting the Apricots to the Plums." A very full description, with engravings, is given in *Revue Horticole*, and the similarity of the plant shown to the Plum, the Apricot, and the Almond, and how it differs from them all; and, finally, the name proposed is Prunopsis Lindleyi. As this shrub is destined to become popular, perhaps it may soon have a good English name that we shall all prefer to call it by. And why not call it the Chinese Flowering Plum?

POISON OF MOUNTAIN LAUREL.

A correspondent of *Revue Horticole* states the following facts from his own observation, in regard to Kalmia latifolia, or Mountain Laurel. A mass of Kalmias after blooming, had been pruned of the heads of seeds, which were thrown upon a pile of weeds that, during the day, had been cut, and was afterwards fed to some goats. The goats were made sick, having violent contractions of the stomach and vomiting, and one of them died the next day. The others, having remained two days without any desire for food, slobbering and trying to vomit, finally recovered. The Kalmia has long had the reputation in this country of being poisonous to sheep, and many cases of death among these animals have been traced directly to eating Kalmia leaves. On the other hand, although the facts are undisputed of the death of sheep as a result of eating the leaves, it is contended that death is due to injuries of the stomach by the sharp edge of the leaves cutting through it, as has been found by examination after death. This conclusion has not been satisfactory to many who are familiar with all the facts. Possibly what is here recorded in regard to the poisonous character of the seeds, may assist in reasonably accounting for the bad effects upon sheep by their browsing on Mountain Laurel.

DEFORMED ROSES.

A writer in *Gardening Illustrated* says: "It is difficult to say what is the cause of this without seeing the plants. Some varieties of the Rose have more tendency than others to produce imperfect flowers. The following are some of the causes which produce deformed blooms: Allowing the plants to become dry at the roots; leaving too much old wood in the pruning; placing single plants in exposed situations, especially in the case of standards; sudden changes of temperature while the buds are growing, such as hot, cloudless days and cool nights; neglecting the plants after the first bloom is over, so that the wood for next year's bloom is not properly ripened before winter; and planting standard Roses near smoky towns, or any Roses in dry soils without preparation, or in raised beds. Rose buds are often bitten or punctured by caterpillars at the base of the flowers, where the calyx turns in to join the seed vessel; these buds burst at the side and make deformed flowers. All buds should be looked over before they show color, and the injured ones picked off."

DAMAGE BY WIND.—Heavy winds have been experienced, this fall, in England, and in many places great quantities of fruit have been blown down. More shelter for fruit-grounds seems to be the lesson taught. Our experience points not less directly to the same course to be pursued here.

QUESTIONINGS.

I looked down into the Rose's heart,
Which grew where the sunlight played:
"Can aught so perfect in every part,"
I questioned, "be doomed to fade?"

I looked down into the Lily's cup,
And drank of its fragrant breath;
And thought, as I drew it gently up,
"So sweet! Is it doomed to death?"

I gazed far into the boundless air,
Where the rainbow spanned the sky,
And wondered much that a thing so fair,
Ever should vanish or die.

I watched the play of a lovely child,
Filled early with gentle grace,
And sighed, "Can one so perfect and mild,
Be clasped in Death's cold embrace?"

And, for an answer, the Roses toss'd
Their leaves to the grass beneath;
The Lily's life was lavished and lost
In one luxuriant breath.

The rainbow shone for one dazzling hour,
Ere it was lost in a cloud;
The parent learned its innocent power,
Ere the child lay in its shroud.

And as I stood by the tiny grave,
And gazed on the velvet pall,
I pondered, "Is there no Power to save?"
"Is this the end of all?"

I looked again where the Rose had died,
And found, in a wax-like room,
The seed which soon shall surely provide,
Another year's wealth of bloom.

I searched the Lily's new tomb, and found
Its life not entirely gone,
For, just at its feet, a little mound
Holds life that shall still live on.

The rainbow's arc had faded away,
But soon, on the cloud's dark shade,
A fairer one in the sun's bright ray
Its brilliant colors displayed.

"If Roses," I thought, "and Lilies, live,
When death has shed their bloom,
And the bow appears new hues to give,
Why must man lie in the tomb?"

Oh! sweet the lessons which these have taught;
All things in nature are rife
With this one truth, which I long have sought—
In the midst of death is life.

And far beyond this region of woe,
Beyond the visible skies,
This much the flowers have taught, I know—
Man's soul to life shall rise.

—DART FAIRTHORNE.

REMARKS AND QUESTIONS.

Enclosed is a flower which I would be glad to have you name through your MAGAZINE. I think it is an annual; it blooms well and branches into a handsome bush, it endures our southern sun well, and is, therefore valuable. Several articles have appeared in your pages on Pansies. In the South, if you wish good Pansies, you must sow the seed in the fall, say in September; they will then bloom in early spring, often as early as February, and continue in bloom until about the first of July, when they generally perish with the heat. The same treatment will answer well with many annuals here in northern Georgia, while if planted in the spring, by the time they come into bloom the heat is too great, and they burn up. Few of the annuals planted north will endure our sun. Can you tell why? Our regular summer heat is only about 80° to 90°, very seldom over 90°, and yet the sun scorches many plants into a cinder, in spite of watering. Is it, as I suppose, because our atmosphere is dryer?

In the February number, page 49, you gave a recipe for destroying plant insects, it is the best insecticide I have ever tried during a long life, it destroyed, by one application, all the green aphis on my Roses, and I have over one hundred and twenty varieties growing. I gave the recipe to a lady friend whose many Roses were nearly ruined by the green aphis, one application destroyed them all. As the materials cost nothing we used it liberally, showered it on, without any ill effect to the plants, and did not syringe afterwards with water, either. On other and more delicate plants I use it more cautiously; I keep a lot on hand in bottles for use, it soon becomes clear and not quite so strong. I have thrown away my Tobacco tea and Persian powder, etc., and use the kerosene only on all plant insects successfully.

Sometime ago I read an article in some publication, directing the runners to be kept off the Violets. I have cut them off, this summer. Is this treatment right, and should it be continued? I keep my Violets in a shaded pit, and want them for winter blooming. I am sorry to trouble you with so many questions, but very short answers will satisfy me.—J. T. N., *Rising Fawn, Ga.*

The flower, of which specimen with leaf was sent, was the white variety of the Madagascar Periwinkle, Vinca rosea

alba. We are pleased to hear so good an account of it, but should expect it, since it is a native of a warm climate; besides, in the reports on the cultivated flowering plants at the South, published in our last volume, this plant is mentioned as doing well in Florida. Most of the annuals cultivated for their flowers are natives of rather cool climates, and though they will not show much ill result from a short period of high heat, yet, if long continued, it is fatal to them. The annuals that can be most successfully cultivated at the South are Antirrhinum, Balsam, Centaurea Cyanus or Bachelor's Button, Cypress Vine or Ipomœa Quamoclit, Ipomœa Bona Nox, Morning Glory, Mirabilis Jalapa or Four O'clock, Phlox Drummondii, Poppy, Portulacca, Tagetes or all the species and varieties of African Marigold, and Zinnia. The Petunia is almost, but not quite, at home in the Gulf States; a place exposed to the morning sun, but a little shaded in the latter part of the day, is probably best for it. Other kinds of annuals require more or less shade in the sunny South. We hope the testimony here given in favor of kerosene as an insect destroyer will direct the attention of plant cultivators to it, as we know they will find it efficient. For the benefit of those of our readers who have not had the opportunity of seeing the recipe referred to, it is here restated. Take a tablespoonful of kerosene oil and mix it with half a teacupful of milk, and dilute the mixture with two gallons of water. Apply the liquid with a syringe, and afterwards wash with clean water. Professor RILEY'S favorite recipe, after much experience, is the following: Add one quart of soft soap to two gallons of milk, and boil them; when cool, add one gallon of kerosene, and stir them together. When used, take as much as necessary of the mixture, and add to it twenty times the amount of water. We have not tested this mixture, and probably for some insects it may be better than the other, if so, it will be worth the extra labor of preparation. The treatment mentioned of Violets is right. If strong plants are desired, that will give the best blooms, runners should not be allowed to grow and rob them of their strength. Seasonable pruning with thumb and finger will keep them in proper form.

SNEEZEWORT—HIBISCUS.

I send you, to-day, a plant and blossom which I want you to name for me, in your MAGAZINE. The plant is a perennial, is very hardy, and grows quite rapidly; it starts up early in the spring, grows about a foot or eighteen inches high and lops over, as the stalk is somewhat slender; the leaves, which grow all up the stalk, are long, narrow and pointed, of a dark green color. At the end of each stem grows a cluster of small, double, white blossoms, about the size of a ten-cent piece and smaller. The plants bloom nearly all summer, and the flowers are lovely for bouquet making. I have raised this plant for years, and think it is the loveliest white flower I have, though the flowers have no fragrance whatever. The plants are in full bloom now, August 19th, and have been for six weeks. I have heard it called Purity Flower; it is as pure white as the snow, and the flowers are nice dried for winter bouquets. Also, please tell me how to treat the Chinese Hibiscus. My plants dropped their leaves in winter, and seemed not to want to start this spring; one has now a few leaves, the root of another is alive, but the stem never has sprouted.—MRS. A. M. C., *Plymouth, Mich.*

The description above is quite correct for the Double White Sneezewort, Achillæa ptarmica flore-pleno, which was the specimen received. As a hardy perennial we can recommend it without reserve. The trouble in this case with the Hibiscus, undoubtedly, is want of heat. This plant should have a warm greenhouse, or even a hot-house. It is not suitable for ordinary house culture.

SOME NOTES.

To water plants in a dry time, stir the soil at the roots with a small fork to break the crust, and hollow the earth toward the plant so that water will settle where it is wanted, and not run over the top. You can pour half a gallon of water on a plant without this precaution and it will do less good than a pint properly given.

Irrigation is as essential in Massachusetts as in California, and it is vastly easier than going round with a watering pot. I set a row of Cabbages, last spring, in a furrow six inches deep, hollowing the soil in a bowl about each plant, and give them water every night in the dry time. It was easy to pour a pailful of water into the furrow, when it would run to each plant and settle in the hollow. The Cabbages throve finely, and were the earliest to head in the town. I shall always plant them in drills this way, and I am convinced it is the best way of setting Strawberries and Celery.

We will never trench Celery more than a foot deep hereafter. The deep trench-

ing is wasted labor. Lay manure six inches deep in the shallow trench, sift soil over this two inches and put out the plants. At night pour in water till it stands up to the leaves, and it will grow to please you. A Scotchman who used to grow prize Celery in the old country kept a barrel half full of horse droppings, to which he put all the house slops and suds, with which diluted he fed the plants every night after the cool weather of August set in. He grew giant crops, very firm and fine by this method. To blanch the Celery it is only necessary to set it upright in a box in the cellar, having a layer of soil under the roots, and then keep it dark. The flavor is much finer when blanched in this way than if earthed up.

Let us hear from the readers of this MAGAZINE about all the fine plants in whatever part of the country—the Wax Plant, which is the wonder of the town; the Fuchsia, that curtains a whole window; the Ivy, which goes twice round the room. These statements serve as standards for other growers, and teach us what to expect of our plants. Above all, give, if possible, the peculiarities of treatment.

In writing of plants make their history and nativity brief, but give much practical detail; especially tell what soil and exposure suits them, if they have a liking for clay, or a taste of lime and old mortar, say so. Tell how much sun they like, and whether copious watering suits them or to be kept nearly dry, what fertilizers succeed with them, what pruning and nipping they need, and near what other plants they look best. Especially give the soil preferred, wood mold, clay, limestone, sandy or sod; also, the local climate, and the uses of each plant.

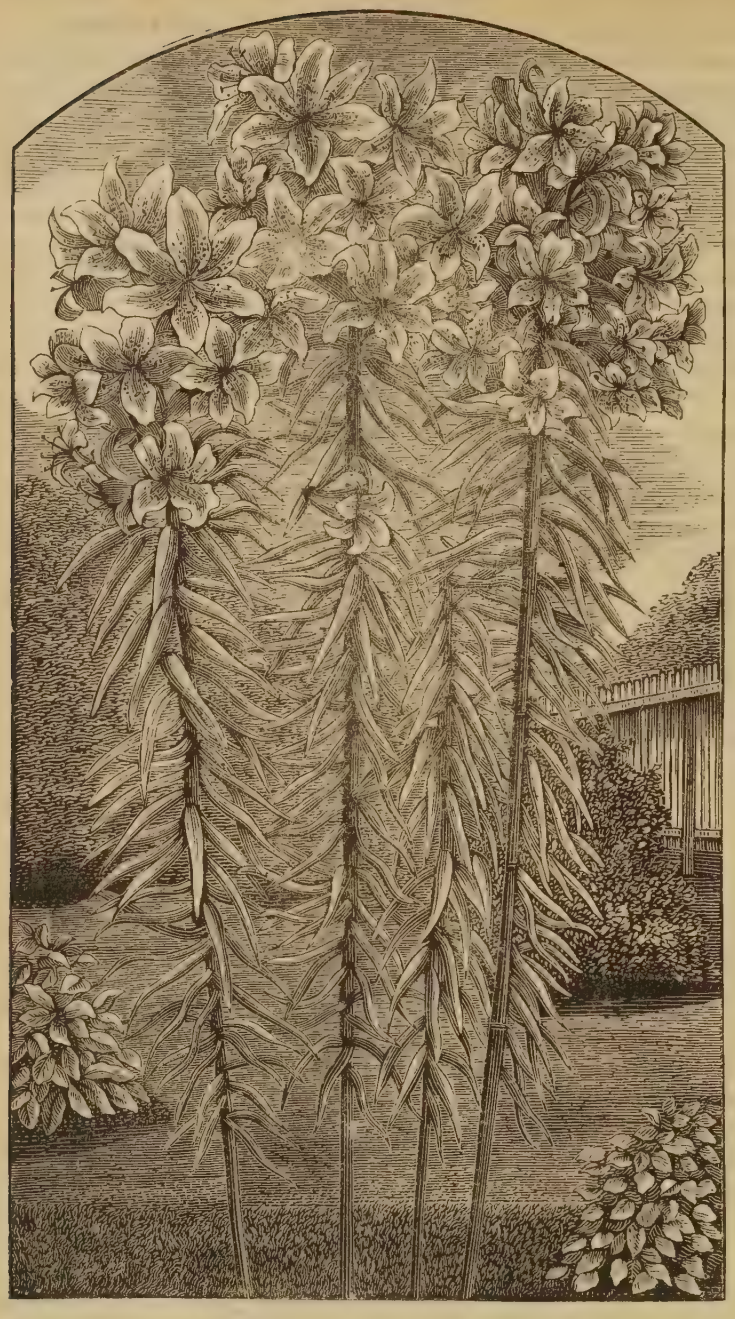
In the Cold Spring neighborhood, Plymouth, Mass., there used to be an Apple tree which was said to yield eight barrels yearly. I was told this by the man whose grandfather planted the tree, and plenty of people will witness the story. The tree was set near the cess-pool, and it was found that its roots entered the drain and partly choked it after a while. It might be a good plan to run small drain pipes to the roots of orchard trees. At least, if there must be a cess-pool on the premises, put it in the orchard where it can be pumped to the trees.—S. D. P.

MOOERS' ARCTIC PLUM.

This Plum originated with Mr. A. T. MOOERS, of Ashland, Aroostook County, Maine, some sixteen years ago, from the seed of a Plum which he ate on a visit to Boston. I have had trees of it for ten years, and am inclined to think it a seedling of the Lombard, which it almost exactly duplicates, except in color. The tree is a vigorous grower, with crumpled leaves and purple shoots, and as it succeeds well in northern Maine and New Brunswick, it must be classed with the hardiest of Plums, though it is not quite "iron-clad," my trees having been injured some in the severest winters. But it is the only Plum that can be relied upon to yield any fruit in our cold, northeastern Vermont. Fruit of medium size, roundish oval, slightly flattened at the stem, suture obscure; stalk slender, about an inch long, with very slight cavity. Skin dark purple, but showing violet red in the shade, with a heavy bloom. Flesh golden yellow, juicy and pleasant, but not very rich; adhering slightly to the stone until fully ripe. Though the curculio riddles the red Canada Plum all around it, I have never seen a single curculio mark upon any of the Mooers' Arctic. It is quite as productive as the Lombard, best on a heavy soil, but does very well on sand when grafted on native stocks.—T. H. HOSKINS, M. D., *Newport, Vt.*

GOOD DAHLIA PLANTS.

I think that I have some Dahlias that are far ahead of any that I ever saw. I have one called Lewis Drake that is eight feet tall, and has had, for the past two or three weeks, from ten to twelve perfect blossoms on all the time. Another dark red one is only a few inches shorter, and has had, for the same length of time, from twenty to twenty-five perfect blossoms, most of which will measure a little over ten inches in circumference. Several more of the same kind, not quite as tall, are loaded with blossoms equally as large. Every one who sees them, says, "O, what Dahlias." I am a passionate lover of flowers, like to cultivate them; have a large variety, and can truly say my happiest hours are spent amongst them. I have taken the MAGAZINE ever since it was published, and enjoy reading it greatly.—H. H. C., *Rushford, N. Y.*



AURATUM LILY.

The above engraving, prepared from a photograph, represents the three stems of Auratum Lily, raised at Garden City, Long Island, from one bulb planted in the fall of 1881, and which produced, the past season, one hundred and twenty-one flowers, as described last month, on page 277.

ONTARIO FRUIT GROWERS.

The summer meeting of the Ontario Fruit Growers' Association, was, this season, held at St. Catharines, on the 29th and 30th of August. The President, Wm. Saunders, of London, occupied the chair, and was ably assisted by the Vice President, Mr. Roy, of Owen Sound. There was a large gathering of Fruit-Growers from every section of the Province, some of those residing in the more northerly and north western portions of the Province having traveled between four and five hundred miles to be present. Several fruit-growers from the neighboring State of New York were also there, and contributed no little to the success of the meeting.

The morning of the first day was occupied in an informal discussion on the best new varieties of Raspberries. Among those varieties whose merits were discussed, were the Souhegan, Tyler, Hopkins and Gregg, blacks; and the Cuthbert, or Queen of the Market, Hansel, Turner and Lost Rubies, reds. The general opinion appeared to be in favor of the Cuthbert for red, and the Gregg for black. A paper on Raspberries was read by Mr. B. Gott, of Arkona, in which he treated of the best varieties, their mode of cultivation, &c. In speaking of poor seasons, he had found that it was necessary that there should be a certain amount of dry weather during the blossoming season. The Cuthbert, he thought, was the best variety for rainy seasons, because it blooms so long that it will be sure to get some dry weather while in bloom, and then all the pollen will not be washed away. In pruning, he invariably pinched off the young shoots when from two to three feet high.

The question of ornamental shrubbery was considered. Among Roses, La France appeared to have the preference, Spiræa Van Houttei among the Spiræas,

and Viburnum plicatum among the Snowballs. The Pyramidal Arbor Vitæ was generally recommended as being hardier than any of the Junipers, and therefore to be prefered to any thing in that class.

Among the Currants, Lee's New Prolific Black Currant, La Versailles, and the White Grape Currant appeared to be recommended by the greatest number of speakers. There seemed to be no little anxiety to gather reliable information about Fay's New Prolific, but nothing of importance could be ascertained, as only a few had it under trial, and these few had not yet fruited it sufficiently to speak positively as to its merits. The manure best suited to this fruit was generally thought to be wood ashes.

Mr. WORDEN, of Drummondville, informed the members, in a few well chosen words, that the American Government had taken off the duty on fruit, and that they had now a greatly enlarged market for their various productions.

It appears from the statements made at this meeting that the crop of Apples, this season, is almost a failure, and as a consequence high prices are being asked and readily obtained.

The question, can Cherries be properly grown in this Province, brought out several members from northern sections, who stated that this fruit could not be made to grow in their localities. Mr. BEADLE, speaking on this subject, said that a variety of Cherry, called Vladimir, is raised profitably in the district of the Volga, in northern Russia; this variety has not been introduced into this country.

Mr. J. B. GRAY presented an able paper on Grape trellising, prepared by Mr. BLAIR, of Louth, giving a description of a system in use on his farm, a mile and a half west of the city. The posts are of iron, and so constructed that the vines can be cultivated in every direction. The cost of the trellis is found to be thirty-two cents for every two vines, while with the old system it was thirty-four cents.

For hardiness and general market value, the Early Harvest, Red Astrachan, Grand Sultan and Duchess of Oldenburg were thought, undoubtedly, the best varieties of Apples.

There was a fine display of Peaches, Apples, Pears, Plums and other fruits.

There were also on exhibition some fine specimens of the Niagara Grape, grown in Virginia, as well as a new white Grape grown by Mr. BEADLE, of St. Catherines, and called the Jessica. It was shown by the side of the Champion, raised on the same grounds, and proved to be even earlier than that early variety. It was anxiously examined by those from northern localities, where an early ripening Grape alone will do.

On the last evening a grand banquet was held at the Welland House, which passed off most pleasantly. It was here elicited that the association was in a most flourishing condition, its members numbering about three thousand, and increasing by from four to five hundred annually, and its future prospects are more than usually promising. On the following morning a trip was arranged to Niagara Falls, under the able guidance of Mr. E. MORDEN, who has a fruit farm of considerable proportions in that vicinity, and was well patronized by the members generally.—A. A. W., *Renfrew, Ont.*

BULBS IN POTS—CISSUS.

Let me say to the readers of the MAGAZINE that if they will plant some of their choice Hyacinths or Tulips in pots, and sink them out of doors, this fall, they will be sure the moles will not get them, and it will be so nice, next spring, when they are in bloom, to raise the pot and wash them nicely and bring them to the sitting-room. The plants will keep in bloom a long time, too, if set out of doors each night. Try it, all that can, and report next spring. Can Cissus discolor be successfully wintered in a Wardian case, three by two feet, that has to stand at a north window?—MRS. V. P., *London, Ohio.*

If the general heat of the room is from 65° to 70° the Cissus will probably live.

SWEET PEPPER BUSH.

What treatment does Clethra alnifolia need?—MRS. F. C., *Guelph, Ont.*

Clethra alnifolia is a hardy swamp plant, but we understand it succeeds when cultivated on upland. It has some repute as a bee plant, and as such has been planted. We hope any of our readers who may have raised it will state experience with it.

CACTUS JOINTS DROPPING.

I have a Clove Cactus that is continually dropping off, joint by joint; can you give the reason of its doing so?—MRS. S. S. P., *Upper Sandusky, Ohio.*

We should suspect insects. Make a careful examination of the plant, especially about the joints, and remove any insects that may be found, and wash the plant with soap and water.

LETTER FROM MRS. C. P. TRAILL.

The following extracts from a letter received late in August from our venerable friend and pleasant correspondent, Mrs. C. P. TRAILL, of Lakefield, Ontario, we believe will be equally interesting to many of our readers as to us.

I have been ill and unable to leave the house, and have, in consequence, done nothing to serve the interests of the MAGAZINE, which, believe me, I regret. I send, however, a few remarks, if you think they are worthy of inserting.

The lines on the death of Summer were written by my dear, lamented sister, AGNES STRICKLAND. I transcribed them from my book of manuscript extracts. Her first works were poetical; the stanzas enclosed were written when she was about nineteen, when she became the historian of the Queens of England, by which her name became more widely known, both abroad and at home.

I have read with much interest the correspondence on the subject of that curious parasitical plant, the Dodder. The several speciecs of the family are known as natives of Canada. One of the British species is often seen in wheat fields in England, where it is supposed to prove injurious to the Wheat, by drawing to itself the nutriment of the plant. Another of the orange-stemmed Dodders obtains the name of "Flax Dodder," from its habit of adhering to the tall stalks of the Flax. Of the orange-threaded species, I found specimens twining round the culms of a coarse grass on the stony shores of one of our back lakes, Stoney Lake, Burleigh, and another, wanting the bright color of the stem, was lovingly attached to the stalk of a delicate dwarf species of Golden Rod. The wiry coils of the embracing stem of the Dodder was closely packed with flowers of a greenish white. This species differed from the one that was attached to the culm of the grass, and seemed entirely confined in its selection of a support to the very small Golden Rod, a slender species of Solidago, with small, yellow blossoms and very narrow leaves. By the closest examination I could not detect the point of adhesion, nor did the supporting plant appear to suffer from the close embrace of its foreign companion, as the leaves and flowers were fresh and healthy.

The descriptions given by your correspondent, M. M. B., more nearly correspond with that of the Flax Dodder of England, and must be a far more attractive object than my Stoney Lake plants. I would have enclosed a specimen of the plant attached to the Golden Rod, but it had been in a bad condition when I brought it home, and would hardly have been worth sending to you. I think my parasite is Cuscuta glomerata.

The term "Gold Thread" is given to a charming little forest plant, with shining, evergreen leaves and white, starry flowers, Coptis trifolia. The bright orange, thready, fibrous roots, or rootlets, are intensely bitter, and used as a tonic in herb medicine as a remedy for thrush, or canker in the mouth. The dark, glossy leaves are in threes, sessile, and remain evergreen through the winter, unchanged by frost or snow. Our pretty Gold Thread is both useful and ornamental. It is one of the very earliest of our forest flowers. I had it blossoming in April, in a glass case among Ferns and other wild flowers. It has no relationship whatever to the parasitical Dodder family, as it is one of the Ranunculaceæ.—C. P. T., *Lakefield D. C., Ont.*

THE DEATH OF SUMMER.

By the lengthening twilight hours;
By the chill and frequent showers;
By the flow'rets, pale and faded;
By the leaves, with russet shaded;
By the gray and clouded morn;
By the drooping ears of Corn,
Ripened now and earthward tending,
As man, when pressed by years, is bending
Toward his mother earth, where he
Lowly soon must withering be;

By the meadows overspread,
With the spider's waving thread;
By the harvest moon's long light,
Shedding lustre through the night;
By the soft and shadowy sky;
By the thousand tears that lie
Every weeping bough beneath,
Summer, we perceive thy death.

—AGNES STRICKLAND.

WINTER IN MANITOBA.

Please inform me in the next number of your MAGAZINE, as our winter comes on very early here, if you think it would be better to lift my Moss Rose and Hybrid, Gen. Jacqueminot, in the fall, put them in pots and keep them in the house or cellar through the winter, or to leave them in the garden; and will the Rose of Sharon stand our winters? They are very severe.—MRS. G. M., *Oak Bank, Manitoba.*

Draw the ends of the Rose shoots down to the ground and fasten them there with pegs, draw the soil up around the base of the plants, give a covering of leaves or litter, and they will probably winter securely. Possibly the Rose of Sharon will not endure the climate of Manitoba, as it grows too tall to receive protection from the snow, but it would be well to make a trial of it. The amount of snow there is particularly favorable to Rose culture.

DOUBLE MEADOW SWEET.

Will you please tell me the name of the plant of which I send pressed flowers and leaf? It is hardy, grows three feet high, begins to bloom in June, and continues through July. It makes a very fine appearance, and is admired by all that see it.—MISS M. E. O., *Harper, Ohio.*

The plant is the double Meadow Sweet, or Spiræa ulmaria. It is a most excellent and hardy, herbaceous plant. The little white flowers are borne in large, terminal panicles, and in great profusion.

EARLY GEM POTATO.—The pound of Early Gem Potatoes that you sent me, I planted May 24th, 1883, one eye in a hill; dug August 27th, 1883, getting eighty-four pounds of Potatoes. A good many of them weighed one pound each. The largest two weighed three pounds. —C. W. S., *Morrisville, N. Y.*

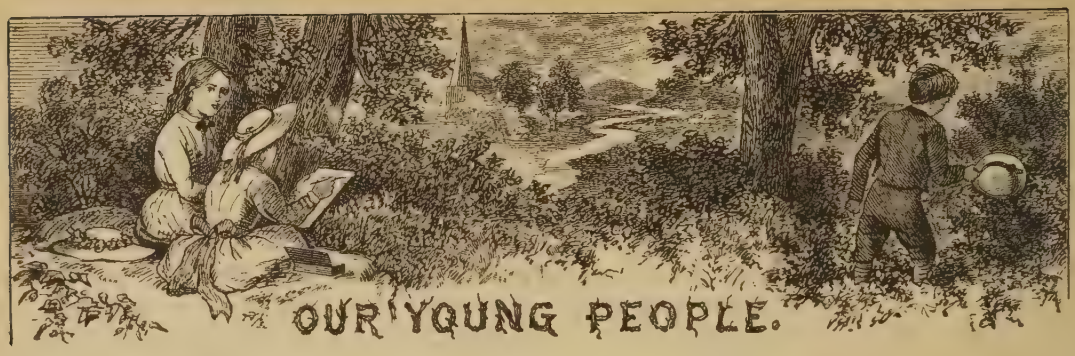
NATIVE FERNS.

The Lip Fern, Cheilanthes, is an extremely interesting genus. The fruit-dots, or sori, in this genus are situated on the extremities of the veins, which are there thickened. The position of the sori, thus will be seen to be the same as those of the Adiantum, but in the latter they are situated on the reflexed edges of the pinnules, while in the Lip Ferns the edges of the pinnules are reflexed upon the sori, as shown in the small figure at the left. Most of the species are hairy or woolly on the under side, making it quite difficult to examine the fructification, and requiring some patience to so divest it as to see it clearly. In this respect the subject here illustrated is no exception, as its specific name well indicates. The specimen from which our drawing is taken came from Salt Lake City, Utah, at an elevation of 6,700 feet, and is represented natural size. The fronds, as may be observed, are bipinnate, but large specimens, such as we have never seen, however, are said to be tripinnate. The upper surface is a little hairy, and the under closely matted with a grayish wool. The stipea are very dark brown, almost black, often a large number of them arising in a clump from the same root-stock.

CHEILANTHES LANUGINOSA.

This Fern was discovered by THOMAS NUTTALL, in Missouri, and one well-known locality of it there is at Fort Independence, where it grows on dry rocks and cliffs in exposed places. EATON says, it grows "in the United States from Illinois and Wisconsin to Utah, Colorado, and New Mexico and Arizona. In British America, collected by BOURGEAU, at the eastern base of the Rocky Mountains, near latitude 51°."

There are some sixty-five species of this Fern known in all parts of world. Eighteen of them are found in this country. As a rule, they occupy warm and dry regions; only one, C. vestita, is a native of this State, and only found in few localities. Texas has nine species, California eight, and Arizona four. C. gracillima is found in California, Oregon and British Columbia, and C. argentea in Alaska. C. Californica is one of the most beautiful species, and we should judge somewhat abundant in the central and southern part of that State. In cultivation these plants should have a light soil, good drainage and not too close an atmosphere.



WEEDS AND FLOWERS.

I planted a seed—a proper seed,
And waited for summer's golden hour;
It came, and over mountain and mead,
Fell sunlight soft and genial shower.
Then, lo! with wond'rous and loving speed,
The earth was grateful, and sent a flower.

I planted again—a vagrant thing,
Without a name or pedigree,
And one bright morning, in the spring,
There came a plant none cared to see;
'Twas only a weed, and could not bring,
Such joy as the flower had brought to me.

Then I read this lesson to my heart,
Men ever will reap just what they sow;
Time bringeth up with its mother-art,
Only the kind we set to grow;
It may be right, with its better part—
It may be wrong, but the end will show.

Nature will nurse what we plant, with care,
And so will time what we do or say,
Or good, or ill, it is sure to bear,
And we to know it some future day;
O, heart of mine, shall your fruit be rare,
Or only weeds, to be cast away?

—Wm. Lyle.

UNCLE JONAS.

"And so ye're plantin' posey seeds, air ye?"

Lucy Hale looked up in a startled way and saw only Jonas Craig, their nearest neighbor, leaning with arms akimbo along the top of the fence above her. "Uncle Jonas," as people called him, was a man of penurious habits and hoarded wealth. His house was plain even to coarseness. His dialect was a mixture of southern and old western frontier provincialisms, an idiom which even yet is heard in certain districts quite east of the Mississippi.

What matter if his gnarled knuckles looked like small, unwashed Potatoes? Had not those hands done a large share toward converting forest land into stump fields, and the stump fields into unbroken tracts of Wheat and Corn? And who could expect him to give his hard earned money in charity, when he always had a load of "Pumpkins," or scrub wood to give for the "haulin?" And if in business, he exacted cent for cent, he was still called honest. The church people, among whom, at a "revival," years before, he had delared himself "floored by something a heap more powerful than the devil," believed that Uncle Jonas truly desired to live a christian life. So, take him, all-in-all, he was considered very respectable.

When baby Lucy Hale was but a toddling thing, and for years after, it had seemed odd that Uncle Jonas had made a pet of her, and always spoke of her as "the fairest bit of flesh and blood that human eyes had ever sot on." His own daughter, the child of his early married life, was plain featured, but possessed of a keen sense of the beautiful which found little gratification at home; her father regularly mowing her flower beds when he did the grass. That, of course, had to be cut for "feed," that nothing should be wasted. Only for this the door-yard grass might have grown until it had tripped Uncle Jonas flat with its tangle. Years after his daughter had ceased trying to have either flower or vine, he thoughtlessly said to her, one day:

"'Pears like it might o' be'n a mighty big loss for mother 'n me if you'd a happened to had a face on you like little Lucy Hale's," and she instantly said to herself, "Now is my time to speak." "I have never wished to leave you, father," she said, "but I want some things about the home different; and I don't want you to forget that I am no longer a child. I earn much more than my board and clothing in dollars and cents. I have inherited from you, father, a will as strong as your own, but always subject to yours, as it should have been. But now the

time has come when I am of age, and past, and I must claim a little indulgence for tastes that I am no more responsible for than I am for my plain face. The utmost I shall ask will cost but little money, but I shall want, hereafter, the entire control of the yard, with sometimes a helping hand from your man when he can be spared. This is all, and I still desire to be a dutiful daughter."

Uncle Jonas said not a word, but, after silently pondering a few moments, got up and went out, and the mother and daughter knew that the point was gained, and each was happy for the other's sake.

As for Uncle Jonas, he had been stunned beyond all speech at this sudden inroad upon his authority in his own house and door-yard! Sitting in the barn, on a reversed half bushel measure, he thought the matter all over, and finally said to himself, "Yes, she's be'n good to work, if she haint good lookin'; but, bless me! I didn't 'low to tetch her feelin's on that p'int. I reckon she has airned mor'n her board and clo'es, but she didn't say nothin' about room rent and fire and lights, and all the rest; nor nothin' about all the years we was worryin' and scurryin' to get her raised all right, when she was no 'count, only to eat and stub out shoe leather. I shouldn't thought of it myself, if she hadn't begun first. That's the way with womenfolks, they don't gene'ly know how well off they air. Let's see, she said 'twouldn't take much money; but I'll jest give that gal the rein, and then I'll wait a bit, and see what comes of it."

Some of this leniency on Uncle Jonas' part was the result of a general softening of his character, brought about by a new and gentle influence, which two years before had entered his home as a promise of joy for his declining years.

It had come to pass on a certain gracious night that a perfect white-lily-of-a-girl had dropped down from the stars straight into the Craig household; and before the cock-a-doodles in the barn-yard had proclaimed the coming daylight she had been named Lucy. Uncle Jonas' cup was now full. He had been heard to say that he had never wanted the "raisin'" of a boy, for fear he'd grow up to be "ornery." But his admiration for Lucy Hale had made this little waif more than welcome. And now we know better than we did who it is talking with the said Lucy Hale at the beginning of the story.

"And so ye're plantin' posey seeds, air ye?" he asked, and she had answered, "Only a few, of hardy perennials," and then inquired after Mrs. Craig, who had recently been ill.

"Well, she was powerful weak yesterday," he replied, "and kind o' douseylike all day; but it seems like she's a heap pearter this mornin' and e't right smart o' breakfast."

"How is Nancy Jane?" she inquired.

"O, she's diggin' in the dirt, too; her aunt's come and tuk the keer of her mother off'm her, and now, between you and me, Nancy Jane wont be no more account now till fall." Lucy made him wince a little by rejoining,

"Then a good deal of my summer work is of no account, either. Tell me, now, about my little name-sake."

"I wish to goodness I could tell you all about her; but I aint got no words to fit. She grows pootier every day, and sweeter, too; and I'm sartain, Lucy Hale, she's nigh as pooty, if not pootier, than you was at her age, and a heap sight more angelic'ler, for you had right smart o' temper, and when things went agin ye, you could git up a little rip and tear on short notice. But our little Lucy,—well, I kint tell ye what strange feelin's I have about her sometimes. Now, this mornin', as I was a lookin' at her peart ways, and listenin' to her chitter-chatter it seemed like she was too good for us and our common ways, and all at onst it 'peared like she was a sort o' prayer, and not jest that nuther, but nearer to a benediction, a kind o' blessin', you know, and it made my dry, old eyes wet."

"Of course, she is a blessing, Uncle Jonas, and if she were too good for you, she never could have been yours, so get all the comfort out of her you can. You are too good a christian to make an idol of her," said Lucy Hale.

"I do' know, I do' know, I'm afeared that's jest what I've be'n a-doin', for she's past common, that child is."

As time passed on and Uncle Jonas noted how his Lucy revelled in the flowers that now met her at every turn, he mentally decided that they were made for such as she, and his entire assent to the innovation was gained when, one day,

Mr. Hale remarked, "Why, Uncle Jonas, your place is so improved in appearance that it would sell for five hundred dollars more than it would have done two years ago."

That settled it, and Nancy Jane's palmy days had come.

But, by and bye, there came a time when a doom seemed brooding in the air. But it was only the white angel of of peace, called death, angel of peace to the pure in heart. But human ties are strong and the flesh is weak. There was shuddering and fear in many households. Eagerly news was sought from neighbor to neighbor. Two were missing from one house, one from another, three from another, and still the doleful work went on.

One morning, after breakfast, Uncle Jonas said, "Don't keep Lucy coddled up; let her run while she kin. I know she'll have to go. The like of her is not for us."

A cold chill of dread seized wife and daughter, but the latter said, firmly, "Don't be foolish, father; the child is perfectly well. We are all good enough for her, because we love her so. Why not think of her in that way, and not always that she is too good for us? I have no patience with it."

But four days thereafter she lay still and white, covered over with the flowers her father had learned, at last, to love for her sake. When she first felt herself ill, she had asked, "Have I got diphtheria?" and getting no answer, she said, "Don't be scared, anybody; I'm not a bit afraid, and nobody must kiss me now, for they might get it;" and then turned her face resolutely away from them, and soon became unconscious, talking all the while of the white Roses and Lilies she had been helping her sister to cut to send to the mourning homes. Once she said, "We'll send them all, wont we, sister? I don't want any saved for me." And thus, while she thought she was busy cutting flowers, she passed over into the country of unfading bloom.

After a time it became evident that Uncle Jonas' trial had had the effect to soften the stony places in his nature, extending even to his purse and bank deposits. And in a class meeting, among his church people, he told them all about it, not forgetting to tell how he had despised God's beautiful creations, the flowers.—AUNT MARJORIE.

BUTTERCUP.

What a lovely May day, bright blue skies, nice soft breeze, truly the time of the singing of birds has come. I draw my rocking chair close to the open window, and gaze across the street into my neighbor's garden. What a grand old place; a large, old fashioned brown stone house, in a perfect wilderness of flowers. I think of the inmates of the house, and then sigh, how nice it must be to be rich; but hark! who was that re-echoed my sigh? I thought I was alone. I can see no one, but there it is again. I look down, close at my feet is a cluster of Buttercups, another sigh, and I am on my knees to find the cause, and, if possible, remove it. How strange, all the flowers are talking, they seem to be greatly excited over something. I must find out what, so I sink down on my knees in the soft, velvety grass, and as Buttercup is nearest me and looks so sad, I ask her what is the matter; her eyes are full of large, pearly tears as she answers, "O dear! O dear, they are saying I should not be here, that I have no right here among them," and now the sobs were shaking her slender form. I listened with indignation, "and who said this, Buttercup?" But she will not tell me, and the flowers are silent. I glance over the garden, my eyes rest on a group of brilliant Pæonies. They are so confused, I can tell by their blushing faces who was so unkind. But I turn to Buttercup amid the whispers of the flowers; her heart is almost broken, and I soothe her as best I can. I praise her beautiful golden dress; at last I am rewarded, and a smile, like a ray of sunshine, illumines her face. "Why, dear little Buttercup, don't you know God placed you here where He wanted you, and I would not care for any one's frowns, but would just be as bright as possible." "Do you think God really cares for us little Buttercups?" "I am sure He does, or he would never paint all those lovely colors around us." "Yes," said a spray of Mignonette, waving gently in the breeze, "I am sure He cares for us." Buttercup's face is radiant now, and the flowers all are silent, listening to us. "That is what I told Buttercup," says a tiny Heartsease, "I would try and not mind what they say, but do the best I could;" and she bent over Buttercup in the most

loving manner; "and what does the gardener say about you being here?" I ask. "He does not seem to care; sometimes I feel so bad when he comes out to gather flowers and hardly looks at poor me, and when he comes out to work I am almost afraid to breathe for fear he will pull me up and cart me out into the street," and her face again shows signs of tears; but before I can speak, Heartsease interposes, "never mind, dear, I will hide you when I see him coming." "Thank you." I also look my thanks to the dear little flower. I do not wonder Buttercup has felt lonely among all these flowers, rustling their fine dresses in the sunlight; but suddenly through the air come sounds of merry voices, almost drowning the low voices of the flowers. Ah, here they are, a crowd of bright, happy children, almost as fair as the flowers. "They do not notice me, and I am glad; I love to watch them unobserved; now one of them proposes to crown one Queen of May; there is much gay laughing and chatting, and at last they select one of their number, a tall, lovely girl, and now they are busy cutting flowers. I look on in astonishment, I wonder what the inhabitants of the old house think of this invasion, but no one seems to care. I had almost forgotten Buttercup, but her voice recalls me. "Look, they are coming this way, don't let them hurt me." "They shall not," I answer, but they are here, close beside us, and one of them is saying, "we must have some for the crown, something bright." "How would these red Pæonies look?" asks another. "They won't do, they would not match Lina's hair, we must have something golden." "Well, here are some lovely Buttercups, let's take those," and before I can realize it they are gathering a great handful of the lovely blossoms, while the Pæonies are red with vexation; my little Buttercup is radiant, and is being transformed into a thing of beauty in the hands of the skillful girls. Now they have the crown finished, and place it upon the head of their Queen. How sweet she looks, the golden flowers gleaming among her dark curls. Buttercup is happy at last. I am glad. I thought she had forgotten me, but no, she is saying, all unheard by the girls, "good bye, my dear friend, I shall not forget your kind words." Now the merry party are entering the house. I am fast losing sight of her, but I catch a faint God bless you, as she disappears. I turn, and bending, gather the Heartsease, pressing it close to my heart, "only you and I, dear Heartsease, would I could gather your sweetness into my very heart," and Heartsease whispers "Patience." And then I rub my eyes, and wonder if I have been dreaming.—MARY BAKER.

UNWELCOME VISITORS.

Timid little creatures are the Rabbits in their wild state, and with their long, sensitive ears they detect sounds of danger from great distances. In order to protect themselves, they burrow under the earth, thus hiding from the approach of an enemy. For this reason they love to live where the soil is dry and covered with a low growth, or in the woods, well supplied with underbrush, and from these retreats they frequently pay most unwelcome visits to the grain fields, and gather for themselves a generous portion of the grain, often doing much damage to crops. Farmers look upon them as tormenting little creatures, and would prefer not to have them for neighbors. Their fur is variously colored, some of a brown-grey, others grey, black, mottled black and white, and pure white. The latter are very beautiful, for the fur is soft, silky and white as snow. The nose and interior of the ears are tinged with pink and the eyes are pink. The animals are often sought for their furs, which, though inexpensive, are dressed and used for articles of clothing, and in many instances the fur is dyed to imitate more expensive kinds, and of the white skins an imitation of ermine is made. The flesh is good for food, and savory dishes are prepared from it. The Rabbit and the Hare closely resemble each other, but the legs of the Rabbit are shorter than those of the Hare, and, whereas the Hare seeks safety in running, the Rabbit protects itself in burrows. There are many varieties of Rabbits, and some very peculiar, one of these is the Angora Rabbit. It is raised much in France, and is quite valuable for its long, silky fur, and the skins which are used for the manufacture of gloves. There are also numerous fancy breeds of Rabbits, and for some of these animals high prices are obtained. Among the latter,

HARVESTING THE GRAIN.

the Lop-eared Rabbits may be classed, which are noted for their peculiar large, drooping ears. In many homes, where there are household pets, Rabbits may be found among the number, and pretty pets they are; but, like the little birds, they must be kept in a cage. Their food is of a variety of articles, such as Cabbage leaves, Turnips, Celery tops and grain, besides Parsley, Thyme and other high flavored herbs; water is said to be injurious to them. Should they be allowed to run about, they can do as much damage in the garden as in the grain field, for they eat the young shoots of vegetables and other plants, and have a curious and mischeivous habit of barking young trees, therefore, when kept for pets it is necessary to shut them up in cages, or closely fenced yards. When running about in their wild state, it is scarcely to be wondered at that they are looked upon as tormenting intruders, for it is astonishing that such small creatures can destroy so much that is valuable.—M. E. WHITTEMORE.

LETTER FROM JAMAICA.

The following letter from our Jamaica correspondent, we presume, will interest "The Young People" as much as if written by one of themselves, for it is always pleasing to hear from a foreign country.

I see that you have sent me a reminder in the August MAGAZINE, but alas, I am still waiting for the Roses, which will not come, and patience is nearly exhausted. I can endorse all that ANNA WOODRUFF says of them, they are certainly "fussy" plants; but perhaps I have given mine too much rich feeding, which caused them to grow too rank, and as I want your advice about them, I must tell you of the treatment I have given them. In March, 1882, I received from JAMES VICK, La Reine, Glorie de Bourg-la-Reine, Gen. Jacqueminot, Baronne Provost, Edward Morren, Gem and Queen of Prairies, and from another person Madame Laurent, Madame Victor Verdier and Madame Clemence Joigneaux. Well, I dug large holes six feet deep, and placed about a foot of broken brick and stones in the bottom of of each, then I filled up with alternate layers of well decayed stable manure and good sandy loam, and planted one Rose in each bed. They grew very rapidly, and I occasionally gave them soap suds, manure and soot water, with a dash now and then of ammonia in it. In January they all had several strong shoots over twelve feet in length; thinking they were growing too rank to blossom, I cut them all back quite close, on the 4th of February. They

very soon threw out fresh shoots, and I felt confident of having a grand display of Roses in May and June, so I dug about them, I gave them rich stimulants, I coaxed by shading them from the hot sun, being exposed to the south, but all of no use, they will not blossom, indeed, they are fussy plants. What shall I do with them, shall I cut them back again, or shall I leave them alone? Now, the following Roses are in constant bloom, Archduke Charles, Solfaterre, Michael Saunders, Celine Forrestier, Niphetos, La France, Sanguinea and Eugene Beauharnais, and strange to say, I have a perpetual Rose which, now and then gives a quantity of beautiful flowers of a dark crimson color, very fragrant and full. I do not know the name of it, but it is commonly called the Cuban Rose. I am now budding some of the Perpetuals on the Tea. Two buds of Gloire de Bourg-la-Reine, which I set on Michael Saunders are doing well. Is this plan likely to succeed, or will it injure the Tea?

I have also two Grape vines which I received from VICK with the Rose plants, Early Dawn and Duchess, so I made a trellls, like the one shown in the April MAGAZINE, and have just cut six bunches of Grapes from the Duchess; the berries were small but very sweet. VICK describes this Grape as having no pulp; does this mean seed, because I found one seed in each berry, and will it be a good plan to prune it back in December coming, like Fig. 1, in the April MAGAZINE?

I send you some seeds of Nelumbium speciosum; the flower was magnificent, and would make an excellent subject for a colored plate. Adieu for the present.—WM. SPECK, *Port Maria, Jamaica, West Indies.*

Do not prune the Hybrid Perpetual Roses so much; the result of so doing is too strong a growth. Better now leave them unpruned and bend the shoots down to the ground and fasten them there with pegs This will encourage the growth of a large number of small shoots, and from these there will be a better chance for bloom. Budding Hybrid Perpetual Roses on Teas may have the tendency to dwarf them, and thus make them more prolific; but the experiment must tell its own story, whatever that shall be.

The pulp of a Grape berry is the hard part of the flesh at the center, which, in some of our native varieties, never softens at maturity. In the improvement now making in our Grapes, we are obtaining new varieties that do not possess this undesirable quality. It will be proper to prune the vine to three or four buds at the base of the new growth. We suppose that both Roses and Grapes will succeed better on the elevated lands in Jamaica than at the sea level; that the Tea varieties are better there than the Hybrid Perpetuals. Some of our improved varieties of native Grapes ought to succeed.

If frequent mention in our letter column, along with floral associations, could immortalize a place, Pine Bluffs, in Indiana, would be thus honored. What a busy little butterfly-of-a-girl must be the one who so often brings this place to our notice! flitting from flower to flower and then to her pen, to let others enjoy what so pleases herself. She says:

I think that little lame boy's letter was very nice, and, speaking of Jack-in-the-Pulpit, it grows here in almost every place. There is another little plant growing in the Cranberry marshes that looks like it, only when you look for Jack he isn't there, and the pulpit is full of water, and is full all the time.

I am going to be ahead of Jack Frost this time, for I have a Tuberose just ready to bloom. We have very large flowered Petunias. There were two blossoms that grew together like twins, and mamma called them Siamese Petunias. I tied a string about the flower stem so that I might save the seed. We have very nice beds of Asters, red, white, purple and variegated, as large as Roses.

I have another flower from Pine Bluffs. It is a pink one, resembling the single pink Geranium, fine and fragrant. The leaves are small and stemless and of a light green color. I never heard any name for it, nor saw any growing any place but there. I will send you a bunch of pressed ones. I have a married brother living near the banks of Pine Creek, and when I visit him I love to ramble over the Bluffs in search of wild flowers.—I. M. P., *Attica, Ind.*

If other young friends had been as zealous as the writer of the above her letter would not have been alone this month. But we are not surprised at all. The summer has been full of play, rest and recreation; and now the time has come again when the school-bell is heard in the land and winter draws on apace, and there will be less time for pupils to spend in letter writing, and fewer flowers to give the needed impulse, so, perhaps, the letter column will be closed at present. But should any still feel inclined to write, the good Editor will always make room for them, as heretofore.

[The flower mentioned above is a member of the Gentian family; its botanical name is Sabbatia angularis. There are several species of Sabbatia in this country, and all of them go under the common name of American Centaury. —ED.]

That life is a success that benefits others, and the greatest failure is to live only for self.

AGRICULTURAL EXPERIMENTS.—The First Annual Report of the Board of Control of the New York State Experiment Station, for the year 1882, was issued in August as an Assembly Document. This report is comprised in a volume of 150 large pages. As work on the Experimental farm, near Geneva, was only commenced in the spring of 1882, it cannot be expected that any of the many intricate problems of cultivation have yet been solved, but experiments of many different kinds have been attempted and noted, and their repetition through a succession of years cannot fail to be of value to cultivators of the soil. The experiments relate not only to the grain crops and the vegetables that are given field culture, but to the products of the garden, the orchard and the vineyard. As most of our readers are aware, 'Weekly Bulletins" are issued by the station, giving reports of constant progress. The substance of these bulletins, with much additional matter, form the annual reports, and these are, to our positive knowledge, valuable contributions which should find a place in the library of the intelligent and progressive farmer and horticulturist. We shall have occasion hereafter to lay before our readers some points of the reports.

PLANT LIFE.—In a volume of some two hundred pages, bearing the above title, lately issued by Henry Holt and Company, we have the American edition of a most interesting and readable sketch of the vegetable kingdom, by EDWARD STEP. Nearly one hundred and fifty engravings grace the work, illustrating the text. This is a book that one can pick up at any time, and open at any part, and read almost as a pastime, and yet a very vivid account is given of the various phases of plant-life as found in both flowering and flowerless plants. Moulds and fungi of various kinds, fresh and salt water plants, Mosses, Lichens, Ferns, Palms, Orchids, as well as the better known flowering plants receive attention. Microscopic plants, plant structure and growth, the fertilization of flowers, predatory plants, remarkable flowers and leaves, about a Fern, the folk-lore of plants, plants and animals, are some of the subjects treated. To those who cannot give botany much time, and yet desire to know some of the many interesting and remarkable things about plants, this volume can be commended.

THE AMERICAN FARM AND HOME CYCLOPEDIA.—Every farmer and every housekeeper have questions of practice coming up every day in regard to matters with which they have had little or no experience, and require some accurate information easily and quickly obtained. To supply this information to these parties on the thousand and one subjects that present themselves in actual practice is the design of this volume of a thousand pages. The work is prepared by HOARCE R. ALLEN, A. M., M. D., with contributions from forty colleges and specialists. It is published by W. H. THOMPSON, 404 Arch Street, Philadelphia. It has two thousand illustrations relating to agriculture, gardening, fruit-raising, live stock, architecture, household affairs, out-door sports and pastimes, the sick room and miscellaneous topics. It would be impossible to enumerate the subjects mentioned in the text, but there is little that interests the cultivator of the soil and the housekeeper in their employments, that is not in this work brought under review and properly treated. The volume is sold at $5.00, in handsome muslin binding.

MUSIC.—GOLDBECK'S MUSICAL INSTRUCTOR, a monthly, published in St. Louis, we find to be useful to beginners, containing very valuable instructions. The vocal and instrumental compositions are alike excellent. The subscription price is $2.00 a year.

HOUGHTON FARM EXPERIMENTS.—We acknowledge the kindness of Prof. D. P. PENHALLOW, in sending us copies of the Reports of Experiments at Houghton Farm, and from which we shall have occasion hereafter to make some notes.

THE OLD AND THE NEW.—The term of subscription of most of our readers will close with the December number. We believe we have the good wishes of every reader of these pages, but we want something more. We want, on the part of all those that think our publication promotes the general welfare of society, tends to refinement and mental improvement, aids in pleasant, healthful and remunerating employments, to give us their personal aid and influence in increasing our subscription list the ensuing year. Each one has some friends that may be pleased to have the subject mentioned. We do not offer premiums. The price of the MAGAZINE is so low that it will not allow it. We aim, even at great expense, to make our colored plates truthful representations, and in them and our engravings and reading matter, render full value for every cent received. We expect the help of every reader.

NEW YORK STATE FAIR.

The Fair of the New York State Agricultural Society, held in this city, September 10th to 14th, more than realized expectations in the exhibits of live stock; other departments were satisfactory, with the exception of flowers and fruits. Of these, three or four exhibitors made the whole display. Possibly some allowance should be made on account of the frosts which did some damage to vegetation a night or two previous to opening; besides, the season is a poor one for fruit. But when full allowance is made for all unfavorable circumstances, it is evident that horticulture is poorly represented by the New York State Agricultural Society. And to witness an exhibition of the kind just passed through, the impression is very firmly made that the Society itself fails to promote, by proper management, the interests of a branch of industry that enlists the attention and the capital of a large and enterprising portion of our community. Why this state of things exists we are not prepared to say, and trust that it may not continue longer. There is no reason why the horticultural exhibits of this Society should not be on so grand a scale, that, of themselves alone, they should command an immense number of visitors.

SALPIGLOSSIS

ARMSTRONG & CO. LITH. BOSTON.

PAINTED FOR VICK'S FLORAL MAGAZINE